THREE MATHEMATICS

MODULE 9

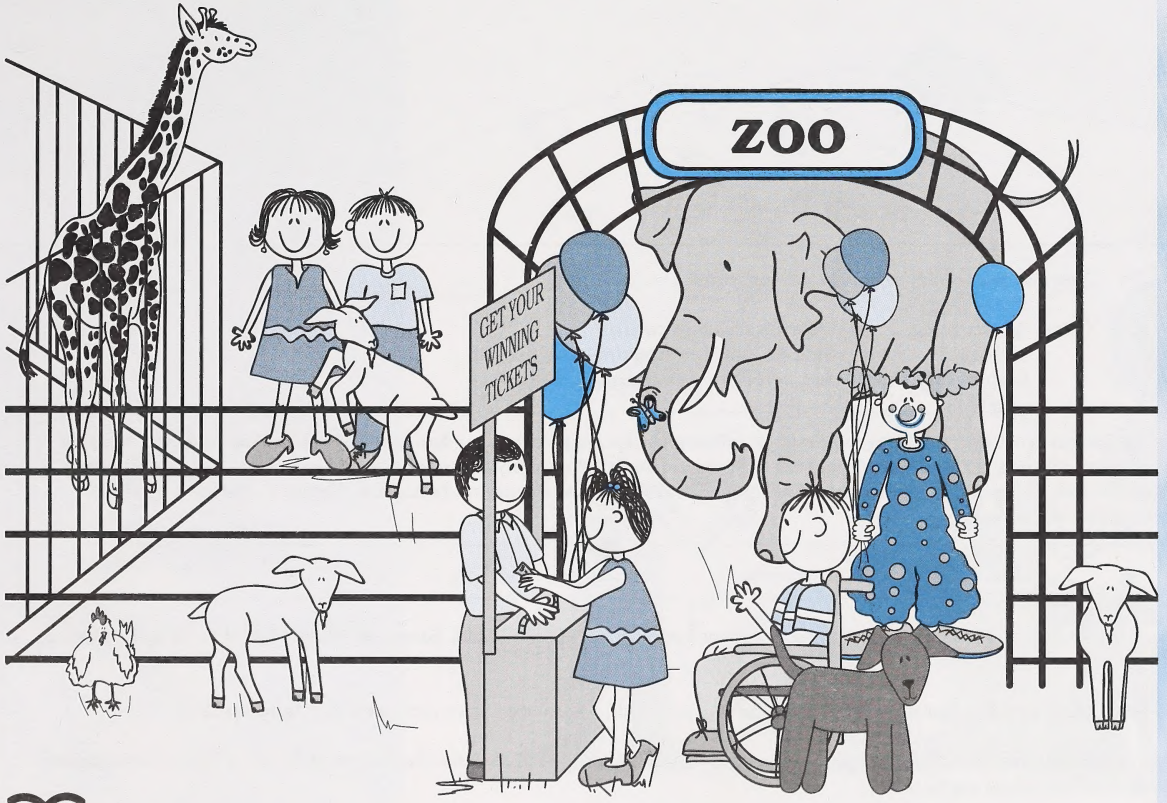
MONEY AND MORE

Learning Technologies Branch

Alberta LEARNING

GRADE THREE MATHEMATICS: MODULE 9

MONEY AND MORE



Learning Technologies Branch

Alberta LEARNING

Grade Three Mathematics
Module 9: Money and More
Student Module Booklet
Learning Technologies Branch
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This document is intended for	
Students	✓
Teachers	✓
Administrators	
Home Instructors	✓
General Public	
Other	

You may find the following Internet sites useful:

- Alberta Learning, **http://www.learning.gov.ab.ca**
- Learning Technologies Branch, **http://www.learning.gov.ab.ca/ltb**
- Learning Resources Centre, **http://www.lrc.learning.gov.ab.ca**

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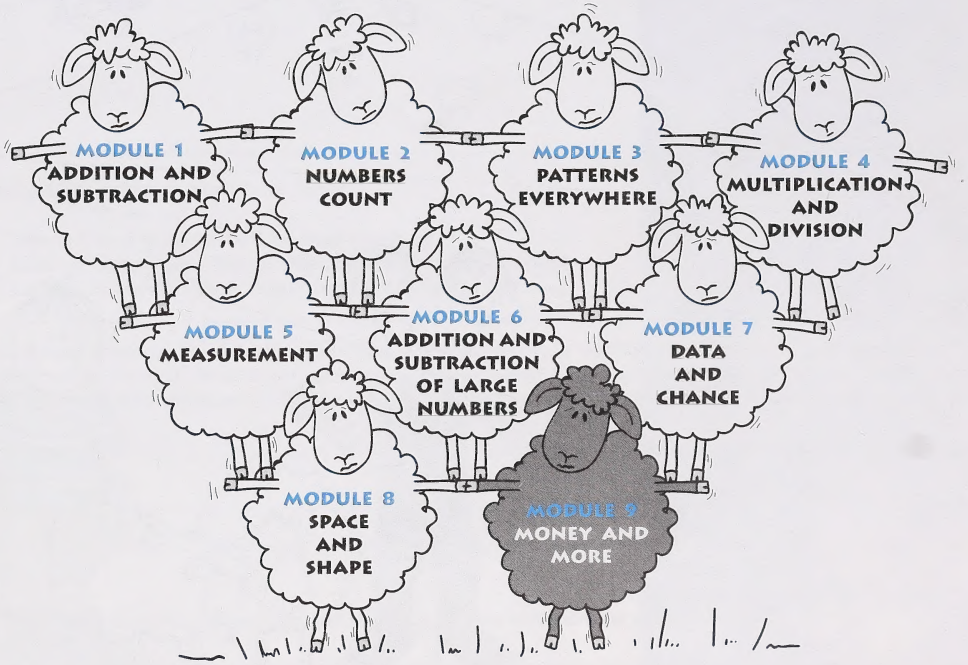
WELCOME
TO GRADE THREE MATHEMATICS

You may not realize it, but you use mathematics many times every day. You are using math when you count the money in your pocket, find a date on the calendar, or sort your toys. As you work through Grade Three Mathematics you will learn how to do many new things. You will also learn how math can be useful in solving everyday problems.

Each unit in the Grade Three Mathematics course is called a **module**. Read the titles of the modules below to find out what you will learn about this year.



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MONEY AND MORE

Congratulations, you are ready to begin the last module of Grade Three Mathematics! In the first part of this module, you will learn more about money and how to solve everyday problems involving money. This module gives you a chance to improve your money management skills.

In the second part of the module, you will find out how much you've learned this year. You will develop the best strategies for completing multiple-choice questions and you will complete a practice test to prepare for your Grade Three Provincial Achievement Test at the end of the year.

It's time to begin!

MATERIALS FOR MODULE 9

Help your student gather these materials and place them in the Math Box. Remove and store materials from previous modules that you will not need for this module.

If you do not have ready access to real Canadian coins and bills, you can use the cut-out coins and bills in the Appendix.

Your student will learn to recognize the value of $5, $10, $20, $50, and $100 bills.

For Module 9, you will need the following items. Small plastic bags or containers are useful to hold your materials.

- assortment of real Canadian coins including pennies, nickels, dimes, and quarters
- one-dollar and two-dollar coins
- a selection of Canadian bills
- base ten blocks
- calculator (A TI-108 is recommended.)
- centimetre ruler

USING THE "ANSWER KEY TO THE SELF-MARKING ACTIVITIES"

You will be checking your own answers in this module, just like you did in Modules 6, 7, and 8. After you have completed the day's activities in the Student Module Booklet, you will see the Answer Key icon.

This icon tells you to use the "Answer Key to the Self-Marking Activities" in the Appendix.

Check to see that each of your answers in the Appendix is correct. If your answer is not correct, can you tell why? If you don't understand why you made the mistake, discuss it with your home instructor. You will use self-marking activities in grade four, so it is important to learn to do this correctly.

DAY 1: WHAT'S THE VALUE?

Did you know that money is used as a measurement? Money is used as a measurement of value to pay for an item or service. (A service is a helpful action done for others.)

You may have experienced buying items, such as food or clothing, or paying for a service, such as a haircut.

Do you know the value of all the Canadian coins and bills?

LESSON 1

The value of an item or service in Canada is usually measured in dollars and cents. Canadian money is made up of many different shapes, colours, and sizes. Other countries have different money units that may look very different from ours.

Take out your assortment of coins.

Find one of each type of coin that you have. Look at both sides of each coin. All the coins have a picture of the Queen on one side. On the other side is a different picture. If you look carefully at each coin, you will see that the value is written right on it.

For example:

DAY 1

You may remember from Module 6 that money values are written using a ¢ sign or a $ sign. A decimal point, or a dot, separates dollars from cents.

Amounts less than a dollar can be written two ways. For example, five cents can be written 5¢ or $0.05. Because there are zero or no dollars, you write $0.05. The numbers you write after the dot or decimal (.05) represent the cents.

Dollar amounts are written using the dollar sign, the dollar amount, and then the decimal. Two zeros are added after the decimal if there are no cents. For example, you write five dollars as $5.00.

The ¢ sign is used when you write the number of cents alone. If you use the dollar sign ($), you do not use the cent sign (¢).

1. Write the name and value beside each of the following coins. When there are two blank lines, write the value in two different ways. Remember to use the ¢ or $ sign.

	Name of Coin	Value
a. 	_____	_____ or _____
b. 	_____	_____ or _____

c. 

_____ _____ or _____

d. 

_____ _____ or _____

e. 

_____ _____

f. 

_____ _____

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

DAY 1

Show your student the $5, $10, $20, $50, and $100 bills if possible, and talk about which ones are used most often. Discuss the pictures, colours, and values of each bill. If you do not have ready access to real bills, use the cut-out bills in the Appendix.

To represent dollars, a variety of bills are used.

Your home instructor will show you different kinds of bills.

Each bill has a picture of a famous person on one side and a different picture on the other side. The number in the corner and the written words at the bottom tell you the value of the bill. For example, each side of the fifty-dollar bill looks like this.

2. Look at the pictures of the bills below. Write the value for each using numbers.

a. 

_____

b. 

_____

c. 

_____

d. 

_____

e. 

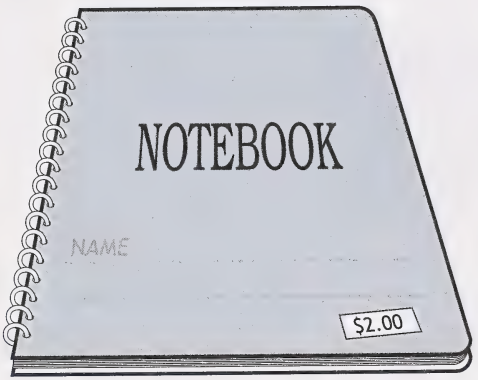
_____

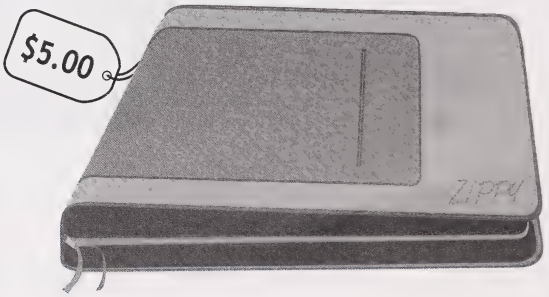
Find "Play Money" in the Appendix.

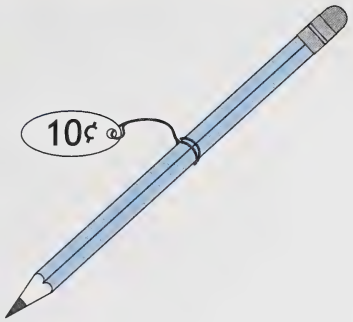
Cut out all the "Play Money." If you have enough real coins, they may be used instead of the coin play money.

Check the coins and bills after the student places them on the pictures.

Look at the pictures that follow. Pretend that you have to give the exact amount to pay for each item. Put one coin or bill on each picture to pay that price. Show your home instructor when you have finished.







There are often several different ways to give the exact amount for an item.

For example, you could pay for the notepad with a quarter or you could pay for the notepad with two dimes and a nickel. You could also pay for it with five nickels or even 25 pennies!

They all add up to exactly 25¢.

Check the coins and bills after the student places them on the pictures. You can further challenge your student to find an additional way to pay the price.

Go back to the pictures of the items on the previous two pages. Show a different way to pay each price. Show your home instructor after you have finished.

EXTENSION ACTIVITIES

Comparing money from different countries may be very interesting.

If your family members or other people you know have coin collections from other countries, ask to examine them. Take a careful look at the sizes, colours, shapes, and values. How are they different from Canadian coins? Are they called dollars and cents or something else?

Rubbings of any coins can be fun to make by placing a thin sheet of paper over the coin and rubbing a pencil lead over the coin. Create a poster with all the different rubbings. Write the value of each coin under it.

Go to Assignment Booklet 9A.

DAY 2: COUNTING COINS

When you shop, you count out enough money to pay for your item. Sometimes you count out the exact amount to give the shopkeeper. Sometimes you estimate how much you will need, give it to the shopkeeper, and get change back. It is a good idea to count your change to make sure you received the correct amount.

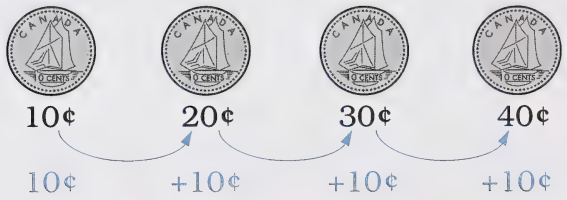
Counting coins well is an important skill. That's just what you will practise today.

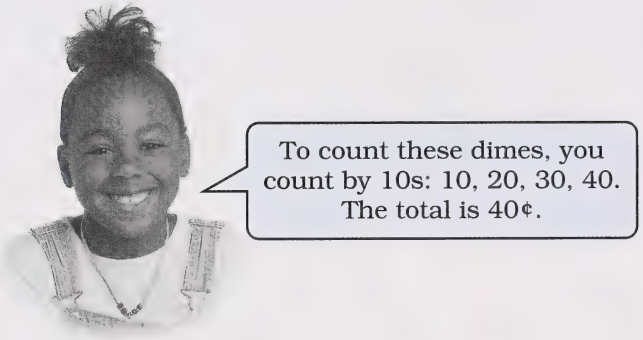
LESSON 1

Discuss your student's experiences with money. Some children have a great deal of experience with making purchases and counting change while others have little experience.

How do you pay when you buy things? Do you count the coins to pay the exact amount? Do you estimate how much money to give the storekeeper and then get change back? Tell your home instructor.

When you count coins, you can use what you know about skip counting to help you. You can skip count by the value of the coins.





1. To count these quarters, you count by _____.

2. Show how you would count and then write the total.

_____ _____ _____

The total is _____¢.

A group of coins may include several different kinds of coins. You can still use skip counting to help you find the value.

Look at the following group of coins. Show your home instructor how you would count them to find the value.

Observe as your student counts the coins. Does he or she organize the coins as follows?

- group coins that are alike
- start with coins of highest value
- switch from counting by 25s, then 10s, then 5s, and then 1s

There are many different ways to count the coins. Usually you count the coins that are the same value together. Start with the coins with the most value. You can set them out in the order you want to count them.

I would count the quarters first. I need to count by 25s, then 10s, then 5s, then 1s.

My total is 94¢.

Look at the coins below.

If the value of the group of coins is more than one dollar, you can write the value in words or use the $ sign and numbers. For example:

The value in this collection is 2 dollars and 30 cents or $2.30.

Count each group of coins that follow. First write how you would skip count and then write the total. Remember to use a ¢ or $ when you write about money. The first one is done for you.

3. a. 

5 10 15 20 25 30 35 40 The total is 40¢.

b. 

_____ The total is _____.

c. 

_____ The total is _____.

d. 

_____ The total is _____.

Some students have trouble counting on from 25 and 75. For example, if there was one quarter and several dimes, the student would have to count 25, 35, 45, and so on. If your student finds this difficult, spend more time practising using real coins and counting on from 25 and 75.

4. Count these collections. First write how you counted, and then write the total.

a. 

_____ The total is _____.

b. 

_____ The total is _____.

c. 

_____ The total is _____.

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

Take out your assortment of coins. If you don't have real coins, use the coin play money used in Day 1.

Now practise counting some groups of coins by following these instructions.

- Put your coins in a pile.
- Close your eyes and grab a **small** handful of coins.
- Count your coins.
- Tell your home instructor the total value.
- Let your home instructor check your total.
- Repeat by choosing a new handful of coins.

Your student will choose a group of coins, count them, and tell you the total. Check to confirm your student's count. If your student is having difficulty, you may want to encourage him or her to take a smaller group of coins or to do the choosing yourself. Allow as much practice time as the student needs.

There are many different ways to show the same value.
Find the total amount of the following coins. Tell your home instructor.

If necessary, count with the student.

You could also make 70¢ like this.

Look back to the values you counted in question 4. Use your coins to show a different way to reach each value. Show your home instructor.

Check the groups of coins that your student chooses. Be sure the value is the same as the collections in question 4.

LESSON 2

In previous work, you discovered the importance of estimation.

Estimating money is an important skill also. When you are shopping, you have to be sure that you have enough money to pay for the item you are choosing.

1. Luke is having lunch in the school cafeteria this week. For each day, count how much money Luke has, and then look at the menu to choose different items that he can afford. Write the items on the lines.

Cafeteria Menu

Macaroni and Cheese	$0.99	Hot Dog	$0.87
Hamburger	$1.27	Soup	$0.58
Cheese Sandwich	$1.05	Fries	$0.90

a. Monday: 

On Monday Luke could have _____.

b. Tuesday: 

On Tuesday Luke could have _____.

c. Wednesday: 

On Wednesday Luke could have _____.

d. Thursday: 

On Thursday Luke could have _____.

e. Friday: 

On Friday Luke could have _____.

2. How much money did Luke have altogether?

_____

3. On what day did Luke have the most money?

_____

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

Go to Assignment Booklet 9A.

DAY 3: COINS AND BILLS

Have you ever saved your money to buy something you really wanted?

When you are making larger purchases, you need to use bills as well as coins to pay. Get ready to practise counting bills and coins in today's activities.

You will also practise multiplication facts in a timed exercise.

LESSON 1

On Day 1 of this module, you looked at Canadian bills and learned about their values. Counting bills is much like counting coins, but remember that you are working with dollars, not cents.

How would you count the bills above? Tell your home instructor.

You can skip count the bills just like you did with the coins. To count the bills above, you can count by 10s because the value of each bill is $10.00.

Students may have different strategies for counting bills. The student may suggest counting by 10s or adding 10 + 10 + 10 + 10 + 10.

Canadian bills come in values of $5.00, $10.00, $20.00, $50.00, and $100.00. There is also a $1000.00 bill, but it's not used very often.

1. Show how you would count the bills. Then write the total value.

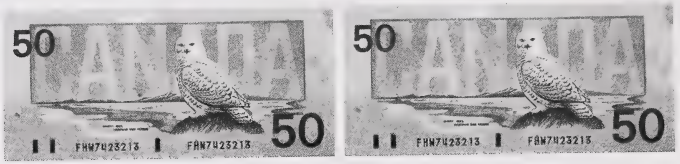
a. 

_____ Value: _____

b. 

_____ Value: _____

If your student has difficulty counting by 20s or 50s, spend more time practising.

c. 

_____ Value: _____

Take out your play money used on Day 1.

2. Use the play money bills to show two ways to make each of the following values. Ask your home instructor to check each one.

a. $10.00	b. $50.00
c. $25.00	d. $15.00
e. $45.00	f. $35.00

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

Check the student's work. To further challenge your student, ask him or her to show another way to make each value with bills.

LESSON 2

There are times when you need to count bills and coins together. Count the bills first and then the coins.

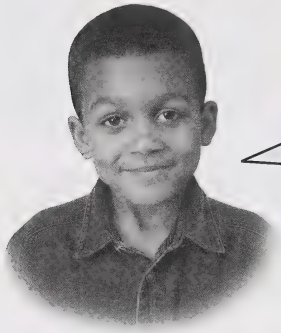
Count $5.00, $5.25, $5.35. There is $5.35.

Sometimes there are bills, one-dollar or two-dollar coins, and other smaller coins altogether like this.

Count the bills first, then the one-dollar or two-dollar coins, and then the other coins.

1. Show how you would count the bill and coins above. Then write the total value.

_____ Value: _____



Another way to count bills and coins is to total the dollars and then the cents.
I count $5.00 + $2.00 = $7.00.
Then 5¢ + 5¢ = 10¢. There is $7.00 and 10¢.
That's $7.10.

If your student has difficulty, continue to practise skip counting until it becomes easier.

2. Write the value of each collection.

a. 

Value: _____

b. 

Value: _____

c. 

Value: _____

d. 

Value: _____

e. 

Value: _____

There are many ways to combine bills and coins to make a certain value.

Use your play money to show **two** ways to make each value. Ask your home instructor to check each one.

- $3.25
- $5.00
- $7.60

Your student should use play money to show each value two different ways. Check the groups for accuracy.

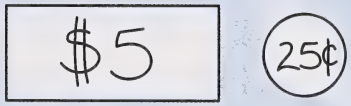
Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

3. In each of the boxes that follow, draw bills and coins to show the given value.

When you draw the bills and coins, use rectangles and circles. Label each bill and coin clearly. Your home instructor will check your work.

a. $9.45

Demonstrate how to draw the bills and coins as follows:



Check the accuracy and clarity of the diagrams.

b. $6.95

In this module, you will practise multiplication, addition, and subtraction on your timed exercises. Today's exercise is multiplication with 25 questions.

Ask your home instructor to time you for 2 minutes. Do as many questions as you can in 2 minutes. Write how many you completed.

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

Write how many you got correct. Remember to complete the Math Facts Graph from the Appendix.

In this module the timed exercises include addition, subtraction, and multiplication. Assist your student in determining his or her strengths and needs. Plan further practice if necessary.

TIMED EXERCISE: 2 MINUTES

$4 \times 3 =$ _____ $3 \times 5 =$ _____ $8 \times 2 =$ _____ $4 \times 4 =$ _____ $6 \times 5 =$ _____ $9 \times 4 =$ _____ $2 \times 7 =$ _____

$7 \times 1 =$ _____ $5 \times 5 =$ _____ $6 \times 6 =$ _____ $6 \times 7 =$ _____ $3 \times 7 =$ _____ $0 \times 7 =$ _____

8 × 3	6 × 5	2 × 6	4 × 2	9 × 4	5 × 1
6 × 8	3 × 2	7 × 5	4 × 4	5 × 3	9 × 5

Go to Assignment Booklet 9A.

Number completed	
Number correct	

DAY 4: MAKING PURCHASES

When you know how to count coins and bills, you can make many kinds of purchases on your own. Have you ever played store? Today you will have a chance to pretend to buy items from a play store. What will you buy?

Are you ready for some fun?

DAY 4

Your student will need some space to set out the items for a play store. Your student can create any type of store. You can make the store area as elaborate or as simple as you wish. A container with dividers (such as you see in a cash register) is a useful prop. You can use a plastic or cardboard container and tape in the dividers. A cutlery tray would work.

If other children are in the home, they can be involved at their own level.

You have spent the last three days working with coins and bills. Do you think you can count the exact amount to make purchases at a store?

Take out your play money. You can use real coins instead of the paper coins if you like.

Find "Price Tags" in the Appendix. Cut out the tags.

- Ask your home instructor where you can set up a play store. You will also need it for your work on Day 5 and Day 6.
- Think about what type of store you would like to make. You could use stuffed animals to make a pet store, food to make a grocery store, toys to make a toy store, clothing to make a clothing store, or books and magazines to make a book store. You could even gather a little bit of everything and make a general store!
- Gather about 10–15 items that you would like to sell in your store.
- Use adhesive tape to attach the price tags to the items you have gathered. You can make more price tags if you like. The prices should be $10.00 or less.
- Ask your home instructor, a family member, or a friend to be the storekeeper.

- Choose an item to buy. Count the exact change for the item and give it to the shopkeeper. The shopkeeper should count it to be sure you have the correct amount.
- Change places after you have bought at least eight items.
- Have fun!

EXTENSION ACTIVITIES

You can do many other activities with your store if you like.

Make up posters and signs to advertise your Grand Opening. Be sure to include the date and other information.

Make up sales flyers for your store. You can make them on the computer if you have one. Show the items you are selling and the price.

Use a calculator to find the total of several purchases. Pay with the exact change.

Invite your friends to shop at your store. You could even make real treats like popcorn or cookies to sell.

Go to Assignment Booklet 9A.

DAY 5: MAKING CHANGE

When you buy something, you do not always pay with the exact amount. Often you estimate the total and pay more than the price. Then you get some change back.

In today's activities, you will learn three ways to make change. You will also practise giving back change with the fewest coins or bills possible.

LESSON 1

When you do not pay with the exact amount, you estimate how much money to give. Often you round the price to the nearest dollar and pay with dollars.

Sarah and some of her friends went on a field trip to the Science Centre. The students brought money to buy lunch. Sarah wanted spaghetti and meatballs. The price on the menu was $4.79.

Sarah had the following money:

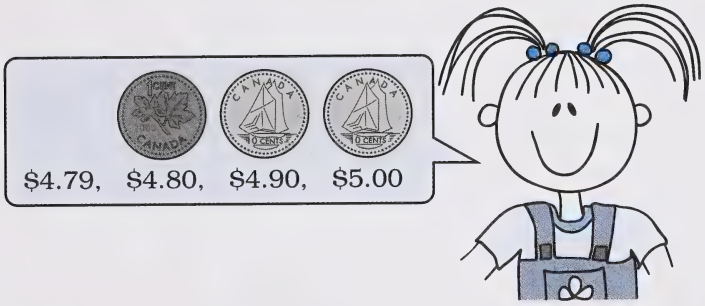
1. The price of the spaghetti and meatballs rounded to the nearest dollar is _____.

2. Fill in the circle that shows the correct amount that Sarah should give to the person at the cash register.

   ○ $5.00 bill
   ○ 2 one-dollar coins
   ○ 1 two-dollar coin

Sarah paid with the $5.00 bill because that was the closest to the price.

The lady at the cash register gave Sarah a penny and two dimes. The lady counted the change by counting on from the cost of the item to the amount of money that Sarah paid.



One way to count change is to say the price of the item, add pennies to the nearest ten or 25, and then add quarters, dimes, or nickels to reach the total that was given. This takes lots of practice.

Many businesses have cash registers that figure out the change automatically when you enter the cost of the item and the money given. If Sarah gave $5.00, the person would enter 5.00 into the cash register after the price of the item. Then the amount of change would be shown automatically as $0.21.

Now you have learned to make change by counting on or by using a cash register.

Take out your calculator.

You can also figure out change by using your calculator.

If you use your calculator, you would press the following keys to calculate the change.

[5] [•] [0] [0] [−] [4] [•] [7] [9] [=]

5.00 − 4.79 = 0.21

Now try it on your calculator. When you are entering money amounts, remember to enter the decimal.

The change could also be figured out using the pencil-and-paper method as you learned in Module 6.

$$\begin{array}{r} \$5.00 \\ -\ \$4.79 \\ \hline \$0.21 \end{array}$$

In each method, the change was calculated as $0.21 or 21¢. The person at the cash register knew what coins equalled 21¢ and gave Sarah two dimes and one penny.

Would you like to receive this change or 21 pennies?

When people give change, they usually try to give you the fewest coins possible. Sarah would not want to get 21 pennies back as all those pennies would be too heavy!

Take out your coins and your play money.

3. Pretend you are giving back change for each amount that follows. Use the fewest coins you can. Then write to tell what coins you used. The first one is done for you.

   Use your real coins or play money for help.

Amount	Making Change
$1.37	1 one-dollar coin, 1 quarter, 1 dime, and 2 pennies
$2.15	
$0.71	
$1.53	
$0.60	
$2.45	
97¢	

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

LESSON 2

Now it's time to practise what you have learned in your store.

- Ask your home instructor to be the shopkeeper.
- Choose an item from the store.
- Estimate the price to the nearest dollar. Give that amount.
- Listen and check as the home instructor counts back your change.
- Trade places after you have bought five items.
- Now you have to count back the change in the fewest coins possible.
- Keep practising until you are good at counting back change.
- Try using a calculator and paper-and-pencil method, too.

Go to Assignment Booklet 9A.

Act as the shopkeeper for the student. Demonstrate how to count change by saying the price and then counting as each coin is presented. Give change with the fewest possible coins. For example, if the student bought an item that is priced $3.25 and paid with a $5.00 bill, give back three quarters and a one-dollar coin. Say "$3.25, $3.50, $3.75, $4.00, $5.00." Some students find this difficult and may need lots of guidance as they start to make change for you. Encourage the student to keep practising and to listen to real-life experiences of making change.

Allow the student to try making change using the calculator. Then ask the student to figure out the change using the pencil-and-paper method.

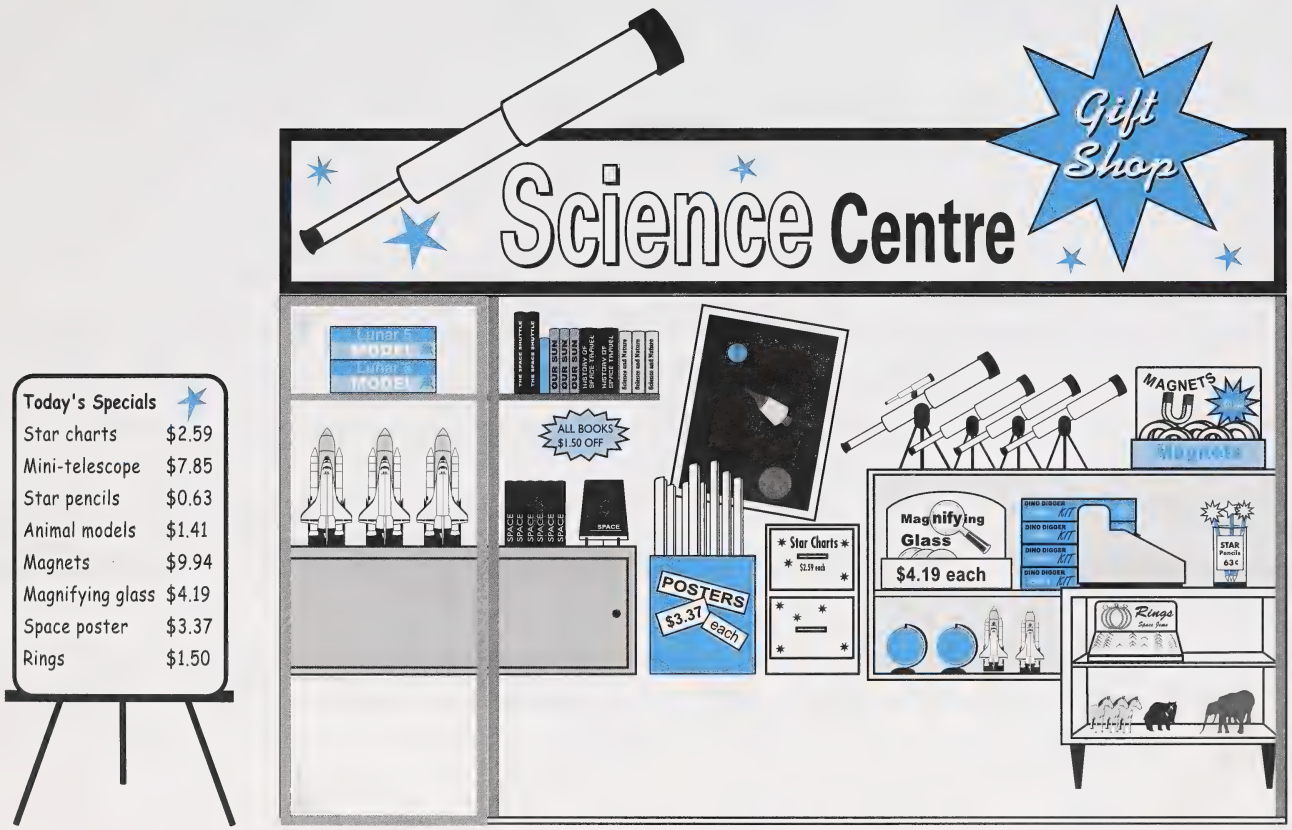
DAY 6: PROBLEM SOLVING

You will work with money your whole life! Today you'll look at some word problems involving money.

The skills that you learn today may help you many times in the future!

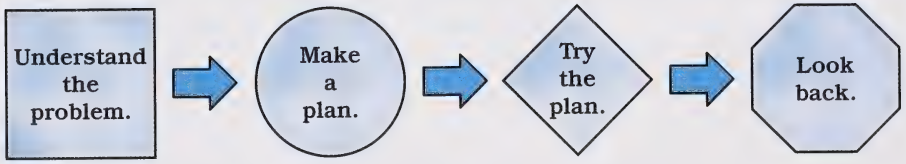
You can solve money problems in a variety of ways. You may want to use your play money and coins to act out the problem. Sometimes a paper-and-pencil method of calculating the answer is the quickest. If there are several numbers to add or subtract, you may want to use a calculator. Sometimes you just need to estimate.

When Sarah and her friends visited the Science Centre, they visited the gift shop.



DAY 6

Use the problem-solving steps and your favourite strategies to find the answers to the following questions. Show your work. Write a sentence to answer the question.



1. Sarah has $5.00. Does she have enough money to buy a space poster for $3.37 and a ring for $1.50?

2. If Mike bought a mini-telescope and a star pencil and paid with a $10.00 bill, how much change will he get?

3. Aziz wants to spend exactly $4.00. Which two items from the **Today's Specials** sign equal exactly $4.00?

4. How much would it cost if someone bought one of each item on the sign?

_____

_____

5. Jodi looked at a book about space. The price tag said $5.79, but a sign above it said **All Books $1.50 Off**. How much would the book cost now?

_____

_____

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

Are you ready for a timed exercise? Ask your Home Instructor to time you for 2 minutes and write how many you completed.

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work. Then write the number correct. Remember to complete the Math Facts Graph from the Appendix.

TIMED EXERCISE: 2 MINUTES

11 – 6 = _____	15 – 7 = _____	16 – 9 = _____	11 – 3 = _____	15 – 6 = _____	17 – 9 = _____
15 – 8 = _____	14 – 7 = _____	13 – 4 = _____	10 – 2 = _____	9 – 3 = _____	14 – 6 = _____
16 – 7 = _____	10 – 2 = _____	9 – 0 = _____	11 – 7 = _____	6 – 3 = _____	13 – 7 = _____

10 – 6	11 – 8	13 – 7	12 – 5	14 – 4	15 – 9	17 – 8	13 – 5	8 – 6
9 – 2	17 – 9	16 – 8	11 – 4	10 – 5	13 – 6	7 – 3	12 – 8	

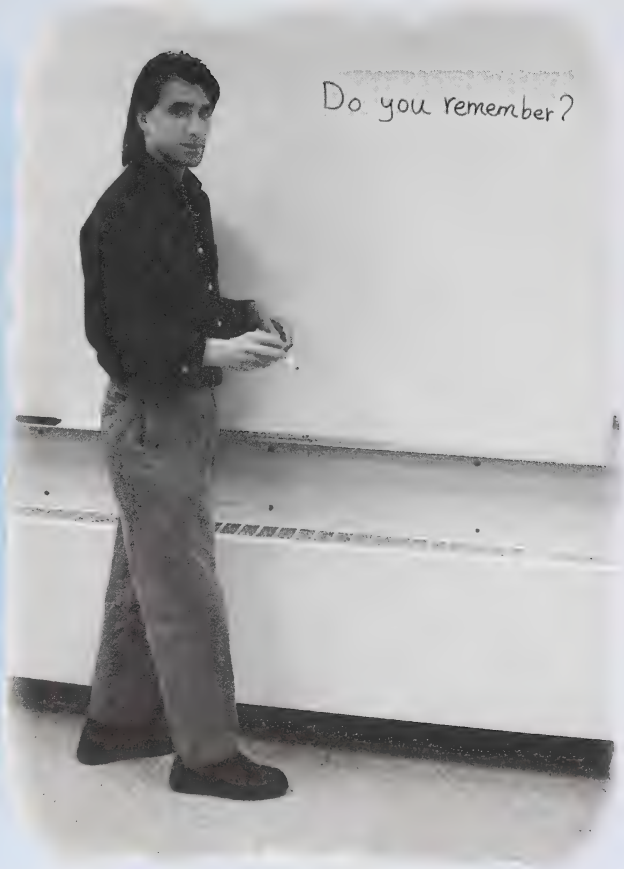
Go to Assignment Booklet 9A.

Number completed	
Number correct	

DAY 7: PROBLEM-SOLVING REVIEW

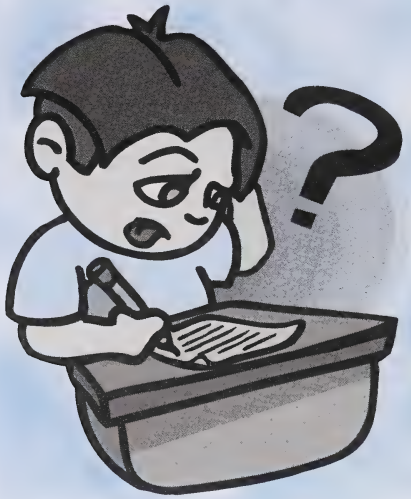
The rest of this module will help you review many of the things you learned in Grade Three Mathematics. In today's lesson, you will review skills about problem solving.

You have been solving different word problems in each module. Solving problems can be tricky. Let's see what you remember.



Your student should tell you about problem-solving steps or strategies that he or she has used this year.

Check the steps with your student. Ensure he or she has a good understanding of what strategies to use.



LESSON 1

Tell your home instructor three things you have learned about problem solving this year.

Problem solving is a very important part of math. You should be able to solve many kinds of problems now.

You have used four steps to help you solve problems.

What are the four problem-solving steps?

STEP 1: _____

STEP 2: _____

STEP 3: _____

STEP 4: _____

Understand the problem.

STEP 1: UNDERSTAND THE PROBLEM.

Be sure you know what you need to find out. If necessary, re-read the problem or the question. Say it to yourself using your own words.

Make a plan.

STEP 2: MAKE A PLAN.

Choose a suitable operation or strategy to solve the problem.

You can use a math operation to solve many simple problems. Addition, subtraction, multiplication, and division are math operations.

Look for important or key words to help you decide which operation you need to do.

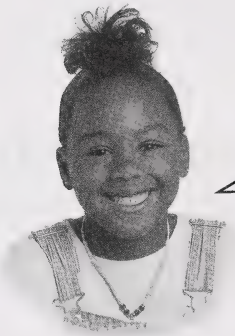
Luke had three piles of hockey cards. There were 4 cards in each pile. How many cards did Luke have **in all**?

The words **in all** are the key words. They give you a clue that you will need to add or multiply. The problem tells about 3 groups of 4, so you will need to multiply.

DAY 7

Sometimes you have to do more than one operation to solve a problem. For example, you may have to add two numbers and then subtract to find the answer.

There were 8 robins and 4 bluejays at the bird feeder. A cat walked by and 6 birds flew away. **How many birds were left?**



There is a clue that two steps are needed. First find out how many there were altogether, and then subtract to find out how many were left.

Problems sometimes have missing information. You may have to look at a chart, sign, or answer from a previous question to solve the problem. You may have to use facts that you know.

Luke's wheelchair racing team was going on a **two-week trip** to the Special Olympics. The team had to race on six of the days. On the other days they had free time to tour with their families. How many days would they get to tour?

To solve this problem you have to know there are 7 days in a week, and therefore 2 weeks has $2 \times 7 = 14$ days.

For more complicated problems, you may need to use other strategies:

- **Act it out.**
  When the problem is confusing or has several steps, use real objects, math manipulatives, or paper cutouts to act out the problem.

- **Guess and check.**
  When you have to find the correct answer out of many possible answers, make a reasonable guess and work it out. Use what you learned from your first guess to make a better guess the second time. Keep trying until you find the answer.

- **Make an organized list.**
  When you have to find all the possible combinations, make a list. Be sure you find every combination but don't list any twice.

- **Draw a picture, a diagram, or a map.**
  When it is hard to imagine the problem in your mind, try drawing a picture, a diagram, or a map.

- **Make a table or a chart.**
  A table or chart can help you see a pattern or see what information you need to find out. It is most useful when there is a lot of information.

- **Look for a pattern.**
  If you spot a pattern in the information, you can use that pattern to make a prediction about the answer. Finding a pattern can often save you time.

STEP 3: TRY THE PLAN.

Do the operation or try the strategy that you decided on in Step 2. Sometimes your first plan may not work. You may have to go back to Step 2 and think of another plan.

When you have found the answer, you often have to write it in a sentence or mark the correct answer. In real life, finding the answer to a problem often helps you make a decision.

STEP 4: LOOK BACK.

Re-read the problem and ask yourself if you answered the question that was asked.

Check your calculations, too. Sometimes an estimation may be a good way to check if your answer is reasonable. At other times you may decide to use the inverse operation or a calculator to check your answer.

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

Go to Assignment Booklet 9A.

DAY 8: TEST-TAKING SKILLS

At the end of Grade Three Mathematics all students who live in Alberta take the Grade Three Provincial Achievement Test.

In today's lesson you will learn some tips to help you do this test. You can use many of these skills when you do any test.

DAY 8

The **Grade Three Provincial Achievement Test** may be the first test you have ever written. The test has two sections as follows:

- Section 1: Timed Number Facts
  These are addition, subtraction, and multiplication math facts just like the ones that you have practised all year.

- Section 2: Multiple-Choice Questions
  There are two parts to this section, and you take a break between each. The multiple-choice questions are similar to the ones you have been solving all year.

TIMED NUMBER FACTS

There will be three different pages of number facts. One page will have addition facts, one will have subtraction facts, and one will have multiplication facts. The addition page and the subtraction page each have 35 questions. The multiplication page has 25 questions. You will have 2 minutes for each page to complete as many questions as you can.

Read the tips on the following page to help you get your best score.

Tips for Timed Number Facts

- You can do the timed facts in any order. Some students do the easiest questions first and then go back to do the difficult ones.
- Work quickly. Do as many questions as you can in 2 minutes.
- Print your answers neatly. The marker must be able to read your answer.
- If you have extra time, go back and check your answers.

Use these tips as you do the timed exercise on the next page.

Your timed exercise will review addition number facts that you have not practised for a long time. You may want to review some questions with your home instructor before you begin.

Are you ready to begin? Ask your home instructor to time you for 2 minutes.

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

Remember to record the number correct here and on the Math Facts Graph in the Appendix.

DAY 8

TIMED EXERCISE: 2 MINUTES

4 + 4 = _____	9 + 8 = _____	6 + 3 = _____	8 + 6 = _____	9 + 4 = _____	6 + 6 = _____	6 + 5 = _____
3 + 7 = _____	4 + 6 = _____	7 + 4 = _____	7 + 8 = _____	6 + 2 = _____	7 + 9 = _____	5 + 5 = _____
3 + 9 = _____	4 + 8 = _____	1 + 3 = _____	6 + 8 = _____	5 + 2 = _____		

8 + 4	9 + 3	9 + 1	7 + 5	5 + 6	9 + 7	9 + 9
3 + 4	9 + 2	7 + 6	7 + 7	8 + 5	5 + 7	8 + 8
4 + 4	9 + 5					

Number completed	
Number correct	

MULTIPLE-CHOICE QUESTIONS

Each of the two parts of the multiple-choice section begins with a short story that your teacher will read to you. Following each story are some problems related to that story. Your teacher will give you a break between the two parts.

You will have 30 minutes to do each part of the multiple-choice questions. You may take up to 15 extra minutes to complete each part if you need to.

You may use manipulatives or a calculator when you answer the questions on this part of the test. You can also use scrap paper for any calculations that you need to do.

You have practised some questions with multiple-choice answers in your Assignment Booklets. A multiple-choice question includes a word problem at the top and several choices below. Here is an example.

When Aziz went skating, the clock looked like this.

The time is

- ○ seven minutes to 2 o'clock
- ● seven minutes after 2 o'clock
- ○ two o'clock
- ○ two minutes after 7 o'clock

You have to choose the correct answer or the answer that you think is the best. In the achievement test, you mark the answer by filling in the circle beside the answer you choose.

Tips for Multiple-Choice Questions

- Read all the information in the question carefully. You may also need to look at signs, charts, pictures, graphs, or maps to answer several questions.
- Underline important words that help you understand what the question asks you to do. Think about the key words you learned in problem-solving activities.
- Read carefully and re-read until you understand the question.
- Read all of the choices even if you think the first choice is the correct answer.
- Use your different strategies in problem solving to help you choose an answer. You may need to do a math operation such as addition, subtraction, or multiplication.
- Choose **one** best or correct answer. You may know that one or two choices are incorrect. That leaves you fewer answers to choose from. Sometimes two answers seem close, but you can choose only one.
- Add, subtract, multiply, and divide carefully.

- Check every calculation even if your answer is one of the choices. Choices often include commonly made errors to trick you.
- Answer every question even if you are not sure of the answer.
- If you have extra time at the end of the test, go back and check each answer. Ask yourself if the answer seems reasonable and if it's the best answer to the question.

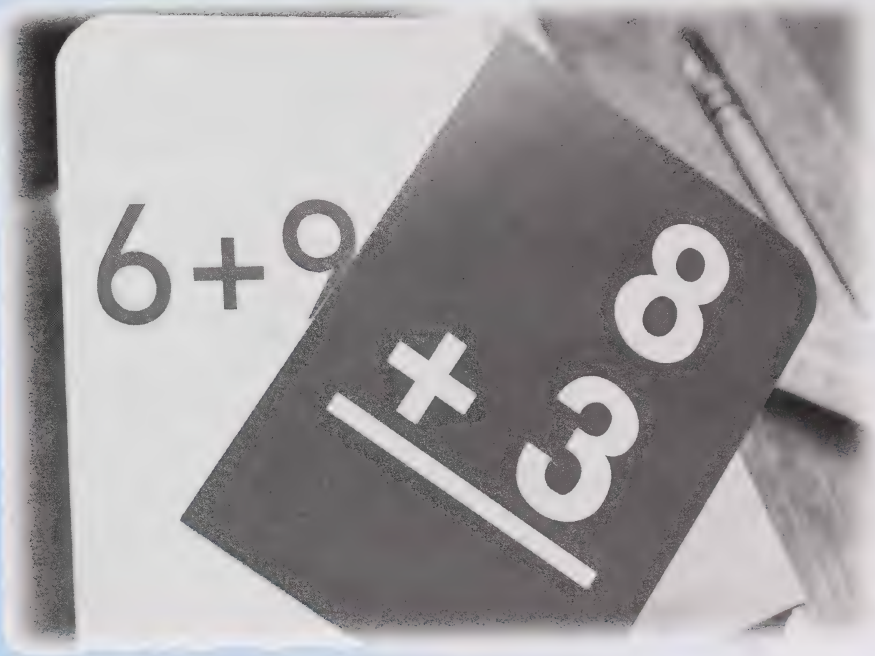
You will spend the next several days reviewing what you have learned in Grade Three Mathematics. As you review, you will practise answering multiple-choice questions. On Day 18, you will have a chance to do a practice test of multiple-choice questions.

Go to Assignment Booklet 9A.

DAY 9: LOOKING BACK TO MODULE 1

In Module 1, you learned many addition and subtraction strategies. You have probably used these strategies often throughout the year. If you can add and subtract well, you can do math fact exercises quickly and solve many problems more easily.

In today's lesson, you will review some of the most important things that you learned about addition and subtraction. If you have trouble with the questions, go back to Module 1 for help.



LESSON 1

There are many strategies that can help you find the answers to addition problems.

1. Explain how to use each of the strategies below to help you add.

If your student does not recall these strategies, review Days 1 to 3 in Module 1.

a. doubles _____

_____

b. counting on _____

_____

c. making tens _____

_____

d. doubles plus one _____

_____

DAY 9

Subtraction is related to addition. If you know the addition facts well, it can help you remember the subtraction facts.

Subtraction strategies are discussed on Days 5, 6, and 7 in Module 1.

2. Circle the strategies below that use related facts.

using counters	counting back	fact families
doubles	drawing a picture	

Look for important words that tell you what operation to do in a problem.

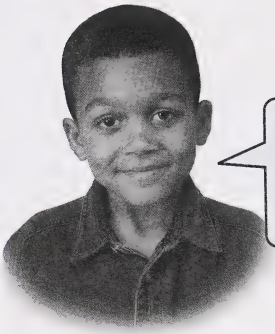
The student can check Day 1 for several "adding words" and Day 9 for "subtracting words." These words are also reviewed on Day 10 in Module 1.

3. Write three words or phrases that tell you to add.

_____ _____ _____

4. Write three words or phrases that tell you to subtract.

_____ _____ _____



Do you remember how you can use what you know about addition and subtraction of smaller math facts to help you add and subtract larger numbers?

5. Write two strategies that you could use to solve the following equation.

   34 + 63 = ?

   _____

   _____

See Days 11, 13, and 14 in Module 1 for addition strategies.

6. Choose your favourite strategies to solve the following question.

   34 + 63 = _____

7. Tell two ways that you could use to solve the following equation.

   87 – 46 = ?

   _____

   _____

Check Days 12 and 15 in Module 1 for subtraction strategies.

8. Choose your favourite strategy to solve the following:

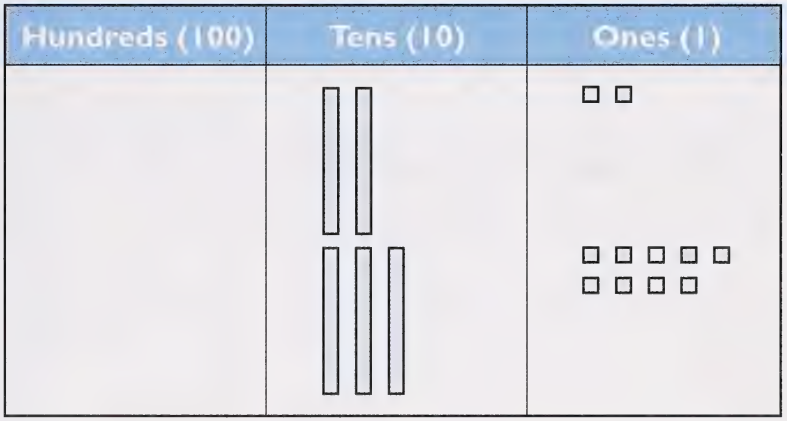
   87 – 46 = _____

LESSON 2

You may need to regroup when you add or subtract.

You can use base ten blocks or a pencil-and-paper method to regroup.

22 + 39 = ?



1. There are _____ tens and _____ ones.

Trade ten ones for a ten rod.

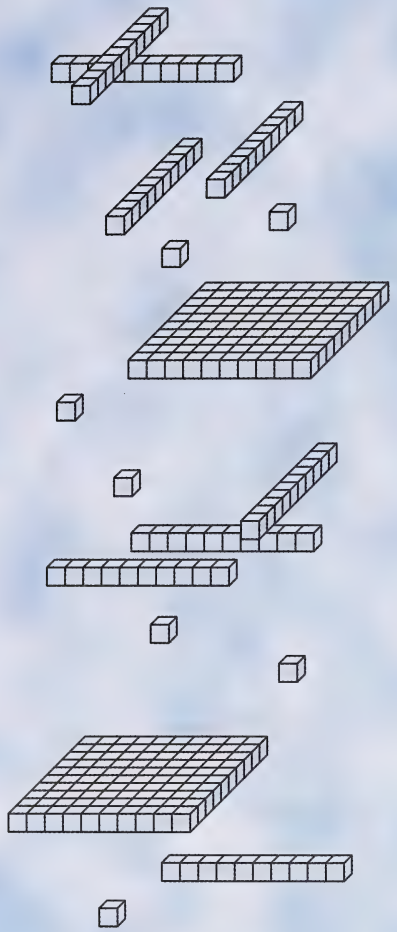
Hundreds (100)	Tens (10)	Ones (1)
		

2. Now there are _____ tens and _____ ones.

22 + 39 = _____

To use the pencil-and-paper method write the numbers one over the other. Add the ones first. Regroup if necessary. Then add the tens.

$$\begin{array}{r} 22 \\ +\ 39 \\ \hline \end{array} \qquad \begin{array}{r} {\scriptstyle 1} \\ 22 \\ +\ 39 \\ \hline 61 \end{array}$$



Do you remember how to subtract an equation like the following?

43 – 27 = ?

Using base ten blocks, show the first number in the equation.

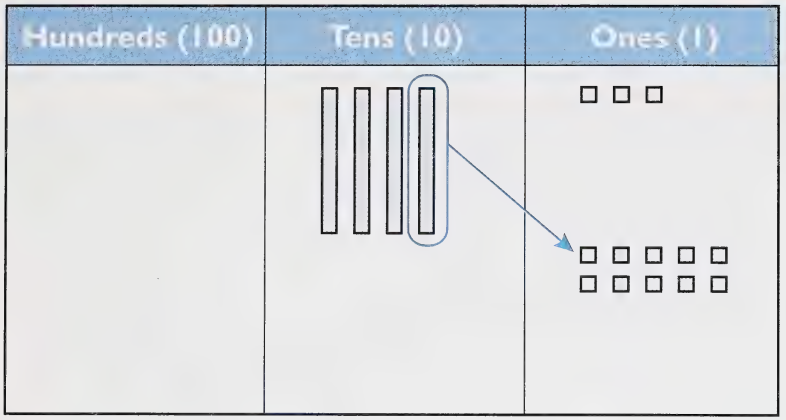
Hundreds (100)	Tens (10)	Ones (1)

Now try to take 27 away.

3. What will you need to do? _____

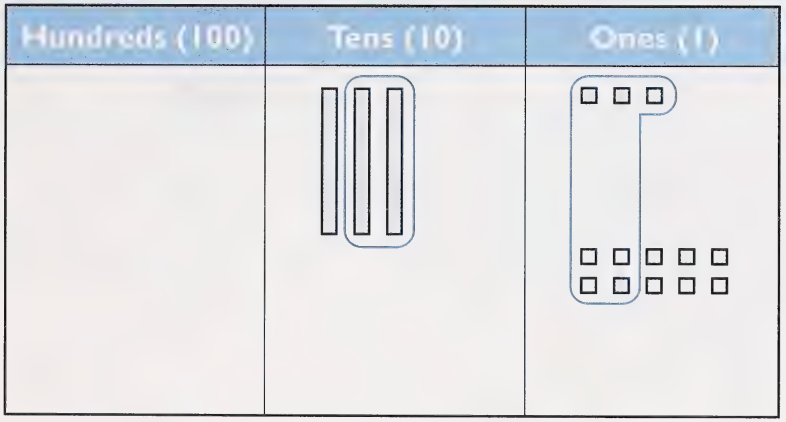
_____

That's right! You will need to trade a ten for ten ones.



If necessary, assist the student to ensure that this concept is understood.

Now you can take 27 away.

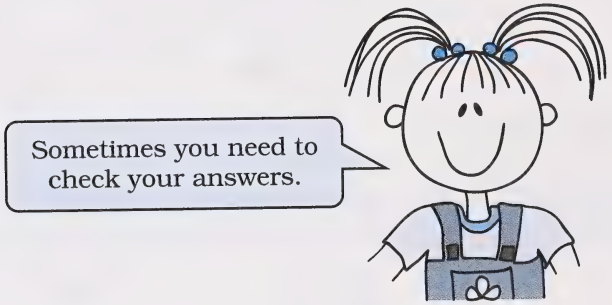


4. You have _____ tens and _____ ones left.

43 – 27 = _____

You can show the same thing using a pencil-and-paper calculation.

$$\begin{array}{r} {}^{3}\not{4}3 \\ -\ 27 \\ \hline 16 \end{array}$$



Day 17 outlines three strategies for verifying answers.

5. Write three methods for checking answers on calculations.

_____

_____

_____

6. Use your favourite method to mark the answers below. Put a check mark (✓) beside the answers that are correct and an ex (✗) beside the answers that are incorrect.

a. $\begin{array}{r} 45 \\ -\ 13 \\ \hline 22 \end{array}$

b. $\begin{array}{r} 37 \\ +\ 43 \\ \hline 80 \end{array}$

c. $\begin{array}{r} 84 \\ -\ 57 \\ \hline 37 \end{array}$

d. $\begin{array}{r} 62 \\ +\ 29 \\ \hline 81 \end{array}$

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

Go to Assignment Booklet 9A. When you finish the assignments for today, fill out the Student's Checklist and Student's Comments about the module before submitting your work to your teacher.

DAY 10: LOOKING BACK TO MODULE 2

In Module 2, you learned about the numbers to 1000.

You worked with sets and showed numbers in many ways.

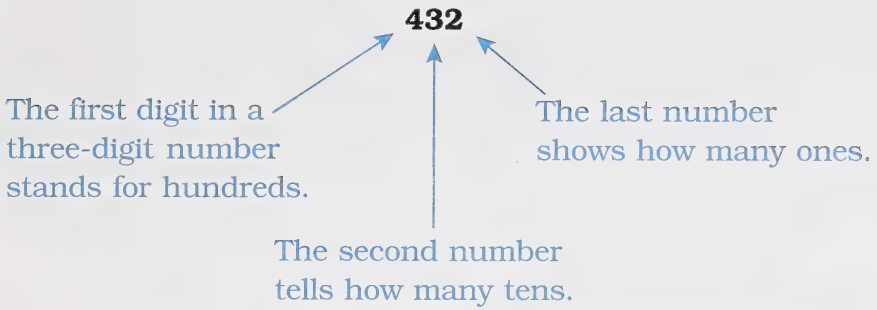
Are you ready to do some counting, comparing, and ordering?

Do you remember what equal parts of a whole are called? They are numbers less than one.

Now do you remember?

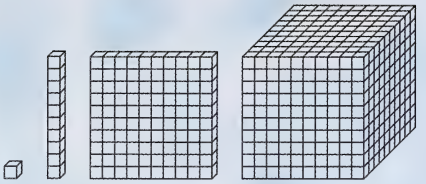
LESSON 1

The number system uses place values of hundreds, tens, and ones to show large numbers. The position of the digit tells its value.

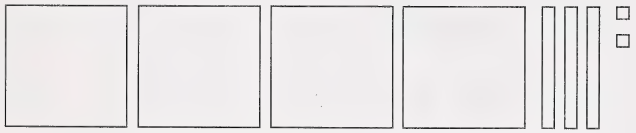


For extra practice with place-value concepts, check Days 1 to 4 of Module 2.

Base ten blocks are designed to represent numbers. You know how to use base ten blocks to build numbers. You can use them to represent hundreds, tens, and ones.



For example, 432 would look like this.



597

597

380

380

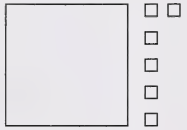
824

824

1. Write how many hundreds, tens, and ones there are in each picture or set.

a. 

_____ hundreds, _____ tens, _____ ones

b. 

_____ hundreds, _____ tens, _____ ones

c. 597 is _____ hundreds, _____ tens, _____ ones.

d. 380 is _____ hundreds, _____ tens, _____ ones.

In 824, there are 8 hundreds, 2 tens, and 4 ones.

The value of the 8 in 824 is 800.
The value of the 2 in 824 is 20.
The value of the 4 in 824 is 4.

2. Finish the sentences.

a. The value of the 4 in 347 is _____.

b. The value of the 6 in 614 is _____.

c. The value of the 2 in 342 is _____.

d. The value of the 7 in 73 is _____.

You can make a number sentence to describe a set. Study the number 657.

The value of the 6 is 6 hundreds or 600.
The value of the 5 is 5 tens or 50.
The value of the 7 is 7 ones or 7.

Another way to write 657 is to write 600 + 50 + 7. The number sentence would look like this.

657 = 600 + 50 + 7

3. Write a number sentence for each number.

a. 783 = _____ + _____ + _____

b. 102 = _____ + _____

c. 291 = _____ + _____ + _____

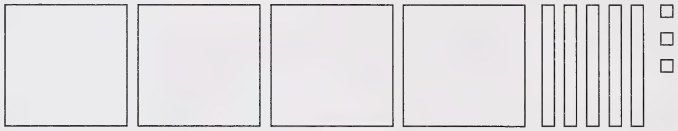
d. 540 = _____ + _____

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

DAY 10

Days 3, 4, 10, and 11 of Module 2 discuss ways of representing numbers.

There are many ways to describe a number.



The above blocks describe 453. You could write 4 hundreds, 5 tens, and 3 ones.

You can also make many other number sentences to describe 453.

453 = 400 + 50 + 3

453 = 400 + 25 + 25 + 3

453 = 200 + 200 + 50 + 3

453 = 100 + 300 + 50 + 1 + 1 +1

Check your student's number sentences. Can the student show at least two ways to describe each number? Give your student other numbers to describe if he or she needs more practice.

4. Write two different number sentences to describe each number. Ask your home instructor to check your number sentences.

   a. 246 = _____ _____

   b. 928 = _____ _____

LESSON 2

Sets can be compared to decide which is greater and which is less.

Day 5 of Module 2 deals with comparing sets.

Look at the two numbers below.

347 437

1. a. Which number is greater? _____

   b. How do you know? _____

2. In each of the following pairs of numbers, circle the number that is less.

   a. 873 893 b. 502 500 c. 189 289

Check Day 6 of Module 2 to review ordering skills.

Sets can be put in order from greatest to least.

Look at the numbers that follow:

349 385 305 450

3. Put the numbers in order from greatest to least.

   _____ _____ _____ _____

4. How do you know that the numbers are in the correct order?

_____

_____

Numbers can be written as words.

You learned how to write the words for numbers to 20 in grade two. Here are the words for the multiples of 10. Review them carefully.

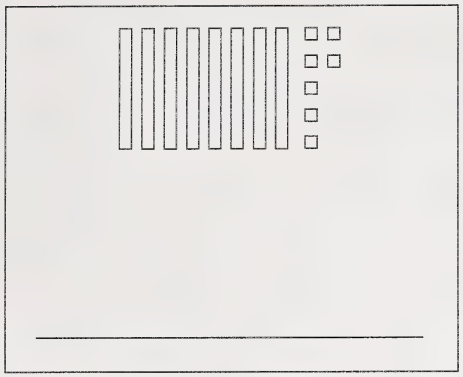
20	twenty	60	sixty
30	thirty	70	seventy
40	forty	80	eighty
50	fifty	90	ninety

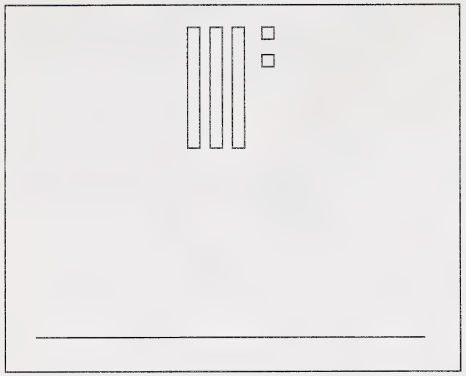
Now you can put them together to write any number to 100.

For example, 68 you would write in words as follows:

Write the word for the tens as sixty.
Write the word for the ones as eight.
Put the words together as sixty-eight.

5. Write the number words for each set.

a. 

b. 

c. 

Ordinal numbers tell the position.

The position or order of a person, animal, or object is shown by ordinal numbers like 1st, 2nd, 3rd. Ordinal numbers can also be written as words: first, second, third, and so on.

6. The van is 3rd or third.

The truck is _____ or _____.

The motorcycle is _____ or _____.

Ordinal numbers can be used to describe dates.

JUNE						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

7. In ordinal numbers, describe the date that is shaded. _____ or _____

8. Colour the ninety-fourth day of the following months.

JANUARY						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 New Year's Day	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

FEBRUARY						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

MARCH						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24 31	25	26	27	28	29	30

APRIL						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

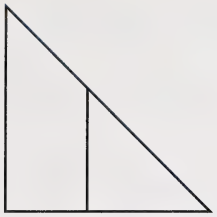
Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

LESSON 3

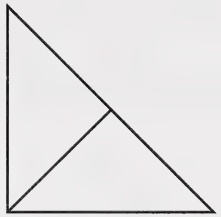
Numbers less than one are represented by fractions.

Equal parts of a whole are called fractions.

Review Days 14 to 18 if your student has difficulty with fraction concepts.



The parts are not the same size.
This triangle is not divided into fractions.



The parts are the same size.
This triangle is divided into fractions.

The number of equal parts an object or shape is divided into tells the name of the fraction.

$\frac{1}{2}$ one-half	$\frac{1}{2}$ one-half

This rectangle is divided into two equal parts.

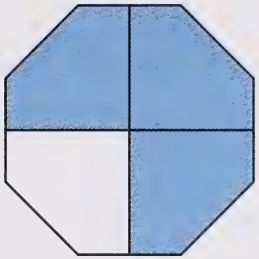
Each part is called one part of two equal parts or $\frac{1}{2}$. It can also be written in words as one-half.

$\frac{1}{4}$ one-fourth	$\frac{1}{4}$ one-fourth
$\frac{1}{4}$ one-fourth	$\frac{1}{4}$ one-fourth

This rectangle is divided into four equal parts.

Each part is one part of the four equal parts. It is written as $\frac{1}{4}$ or one-fourth. Some people say one-quarter.

The following shape shows three of the four parts or $\frac{3}{4}$ coloured.



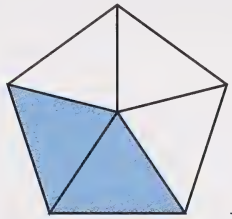
$\frac{3}{4}$

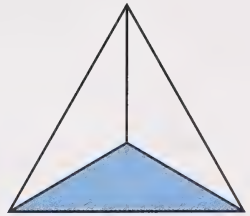
The upper number or numerator in a fraction tells how many parts you are describing.

The lower number or denominator tells how many equal parts are in the whole.

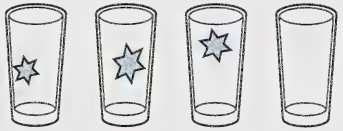
1. What portion of each shape is coloured? Write the fraction beside each shape.

a.  _____

b.  _____

c.  _____

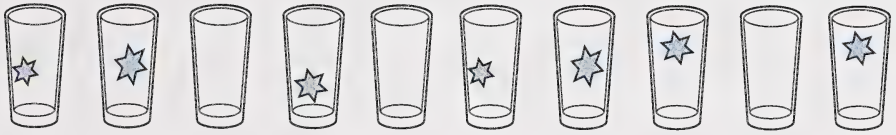
Fractions can also be used to tell about parts of a set.

Look at the set of glasses. 

There are 4 glasses in the set, but only 3 of the 4 glasses have stars on them.

Another way to say this is three-fourths or $\frac{3}{4}$ of the glasses have stars.

2. What fraction of these glasses have stars?



Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

Go to Assignment Booklet 9B.

DAY 11: LOOKING BACK TO MODULE 3

The world is full of patterns. Math is also full of patterns. Spotting a pattern can make it easier to solve many problems.

You worked with patterns in Module 3. You also practised sorting. Today you will review those skills.

LESSON 1

When you sort objects, you look for features that are the same and features that are different.

You often make up a sorting rule and then sort the objects according to that rule.

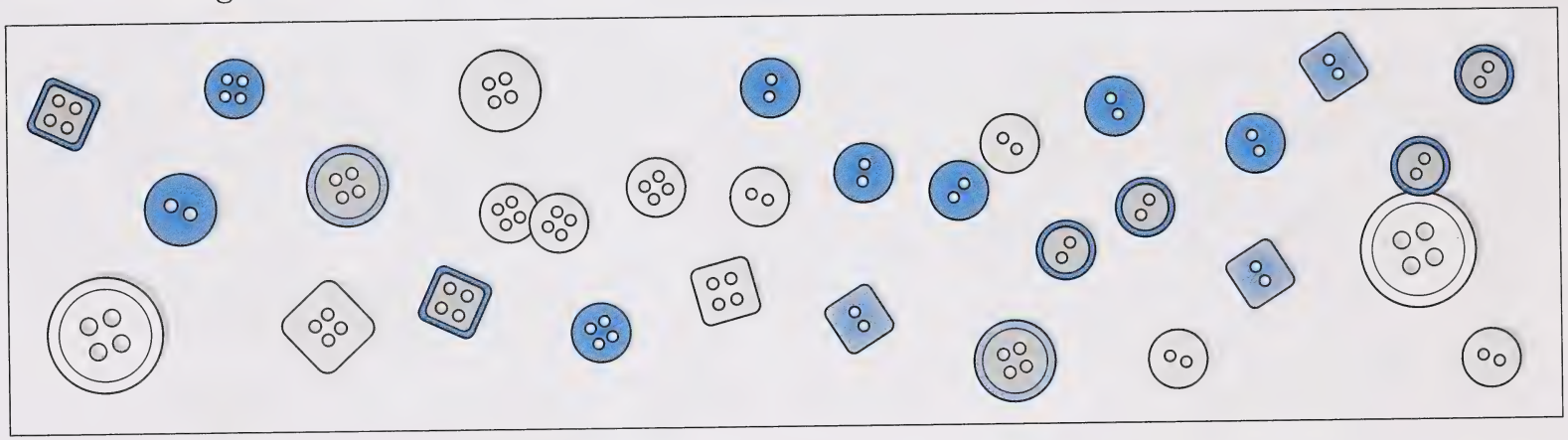
Look at the coins below. How could you sort them?

1. Name one way you could sort these coins. _____

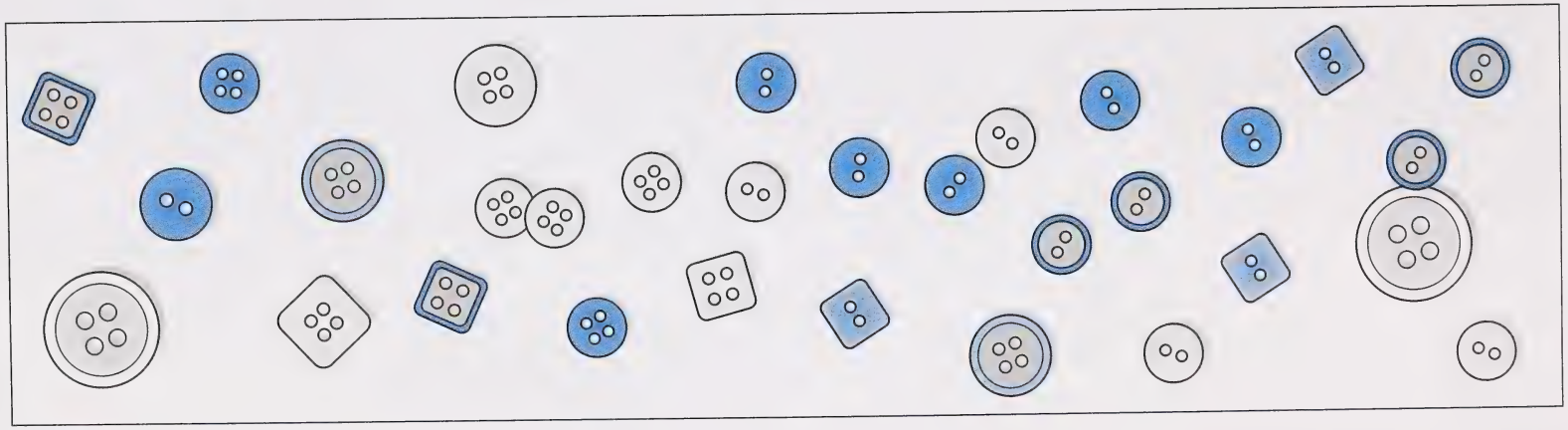
2. Tell another way you could sort them. _____

Follow the sorting rule in each question. Put an ✗ on all the buttons that fit the rule.

3. Find all the large, four-holed, white buttons.



4. Find all the square, two-holed, coloured buttons.



A pattern has elements such as shapes, colours, and numbers in an arrangement that repeats.

Patterns can repeat in a line or in a two-dimensional shape. Patterns that repeat in a line are linear. Patterns that have both length and width are two-dimensional.

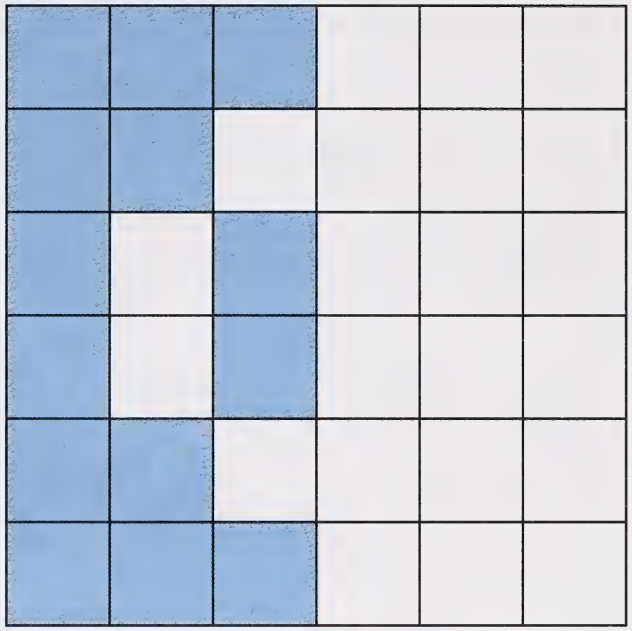
5. Look at the linear patterns. On the lines, draw the next three shapes for each.

a. 

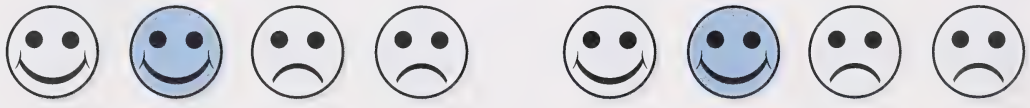
b. 

c. 

6. Study the following quilt pattern. Colour in the squares to finish the two-dimensional pattern.

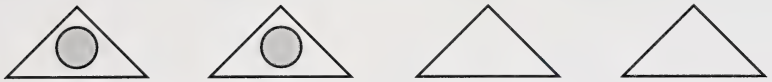


A letter pattern can be used to record a linear pattern.



Each different element is assigned a letter.

7. Write the letter pattern for this linear pattern.



_____

LESSON 2

Numbers form many kinds of patterns.

Skip counting is one kind of pattern you may notice.

1. What pattern do you notice on the hundred chart?

_____

_____

2. The hundred chart shows skip counting by _____

_____

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

If your student had difficulty with skip counting, review Days 8 to 13 of Module 3.

3. Write the next two numbers for each pattern.

a. 340 350 360 _____ _____

b. 125 150 175 _____ _____

c. 3 6 9 _____ _____

d. 400 500 600 _____ _____

Some patterns show skip counting backwards.

Some students find this more difficult. Remind the student they may use a hundred chart to help them count backward.

4. Write the next two numbers for each pattern.

a. 135 130 125 120 _____ _____

b. 800 700 600 _____ _____

c. 432 430 428 426 _____ _____

You can write pattern rules for number patterns too.

Look at the following number pattern.

324 326 328 330

The pattern is skip counting by 2s. Each number increases by two. You could say that the pattern rule is +2 or add 2.

5. Think about the number pattern in each of the questions that follow. Write a pattern rule for each.

   For example:

   185 180 175 170 Pattern rule: –5

   a. 600 500 400 300 Pattern rule: _____

   b. 375 400 425 450 Pattern rule: _____

   c. 735 733 731 729 Pattern rule: _____

Addition and multiplication can form patterns.

Look at this multiplication chart.

x	0	1	2	3	4	5	6	7	8	9
0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9
2	0	2	4	6	8	10	12	14	16	18
3	0	3	6	9	12	15	18	21	24	27
4	0	4	8	12	16	20	24	28	32	36
5	0	5	10	15	20					

6. What pattern do you notice in the shaded row?

_____

7. Look at the row that shows the 5 times table in the multiplication chart on the previous page. Can you figure out the pattern and fill in the missing numbers?

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

Are you ready for your timed exercise? Ask your home instructor to time you for 2 minutes. Write how many you completed.

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

Remember to record your scores here and in the Math Graph from the Appendix.

TIMED EXERCISE: 2 MINUTES

$5 \times 3 =$ _____	$4 \times 5 =$ _____	$0 \times 2 =$ _____	$1 \times 4 =$ _____	$7 \times 5 =$ _____	$6 \times 4 =$ _____
$9 \times 1 =$ _____	$3 \times 5 =$ _____	$7 \times 6 =$ _____	$7 \times 7 =$ _____	$3 \times 8 =$ _____	$9 \times 3 =$ _____

6×3	5×5	4×6	7×2	8×4	3×1	2×7
0×8	9×2	6×5	3×4	2×3	8×5	

Go to Assignment Booklet 9B.

Number completed	
Number correct	

DAY 12: LOOKING BACK AT MODULE 4

In Module 4, you worked with equal groups. You learned how to multiply and divide. Are you ready to review what you learned about the math operations you used?

LESSON 1

To multiply, you count the number of equal groups by the number in each group to find the total.

For example, 3 groups of 4 would look like this.



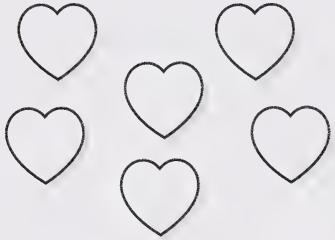
1. Draw a picture to show each of the following:

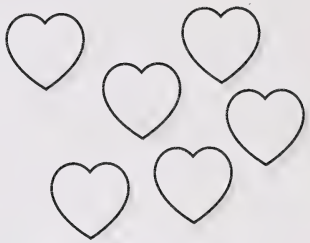
   a. 2 groups of 3

   b. 4 groups of 5

   c. 5 groups of 4

For example, 3 groups of 6 might look like this.

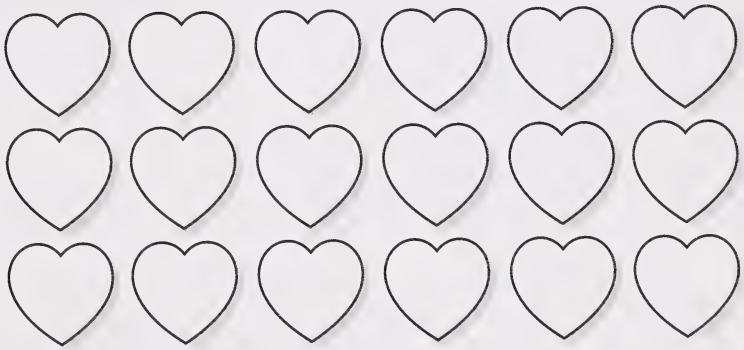




Arranging groups in rows and columns or arrays makes it easier to count them.

You can show multiplication with arrays.

Then, 3 groups of 6 in an array would look like this.

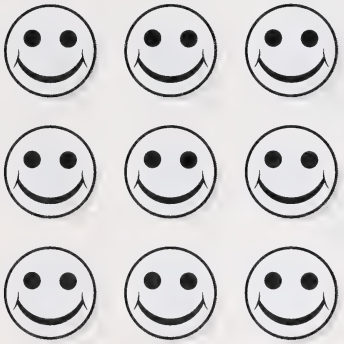


An array can also be shown with a grid.

3 groups of 6

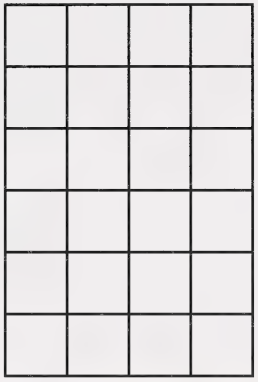
2. What does each array show? Write your answer below each array.

a.



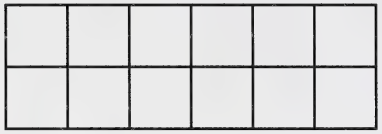
_____ groups of _____

b.



_____ groups of _____

c.



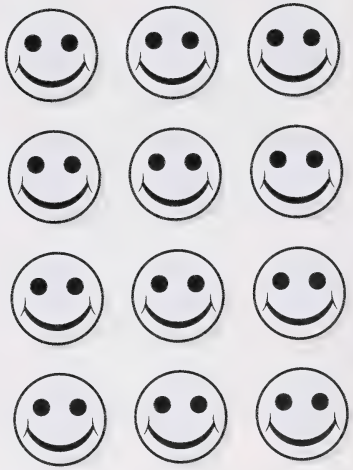
_____ groups of _____

DAY 12

Review Day 3 of Module 4 for extra practice.

You can write number sentences about multiplication.

The following picture shows 4 groups of 3. You could write the number sentence 3 + 3 + 3 + 3 = 12 to tell about the total.

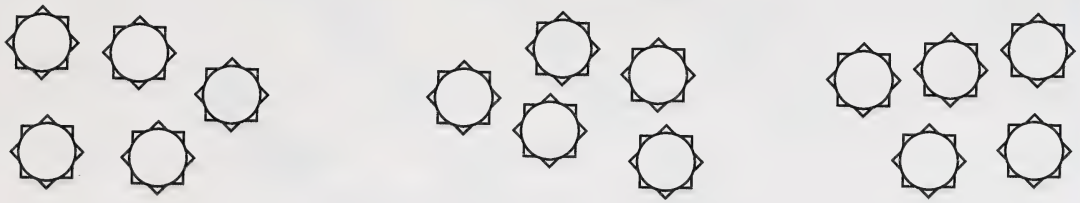


Using the sign for groups of, or multiplication, is quicker.

$4 \times 3 = 12$ or $\begin{array}{r} 3 \\ \times\ 4 \\ \hline 12 \end{array}$

This number sentence is read as
4 groups of 3 equals 12
or 4 times 3 equals 12.

3. Write a multiplication number sentence for the following picture.



_____

Number patterns can help you multiply.

Counting equal groups is like skip counting.

To find 6 groups of 2, you can skip count by 2s six times.

2, 4, 6, 8, 10, 12

A hundred chart can help you with this.

Days 4, 5, and 6 discuss using patterns and skip counting as multiplication strategies.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

4. This hundred chart shows the multiples of _____.

Use the hundred chart to help you find the answers.

5. a. $7 \times 3 =$ _____ b. $5 \times 3 =$ _____

c. $6 \times 3 =$ _____ d. $9 \times 3 =$ _____

Changing the order of the factors does not change the answer.

Assist the student to skip count on the hundred chart. For example, for 7×3 you would count 7 of the shaded boxes (3, 6, 9, 12, 15, 18, 21) to get your answer of 21.

6. a. $3 \times 4 =$ _____ $4 \times 3 =$ _____ b. $5 \times 6 =$ _____ $6 \times 5 =$ _____

c. $2 \times 8 =$ _____ $8 \times 2 =$ _____ d. $2 \times 7 =$ _____ $7 \times 2 =$ _____

A multiplication table can help you find and remember multiplication facts.

x	0	1	2	3	4	5	6	7	8	9
0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9
2	0	2	4	6	8	10	12	14	16	18
3	0	3	6	9	12	15	18	21	24	27
4	0	4	8	12	16	20	24	28	32	36
5	0	5	10	15	20	25	30	35	40	45
6	0	6	12	18	24	30	36	42	48	54
7	0	7	14	21	28	35	42	49	56	63
8	0	8	16	24	32	40	48	56	64	72
9	0	9	18	27	36	45	54	63	72	81

To find 7×8, run your finger along the row that starts with 7 until you come to the column labelled 8. The answer is 56.

7. Use the multiplication table to find the answers.

a. $8 \times 8 =$ _____ b. $5 \times 9 =$ _____ c. $9 \times 9 =$ _____

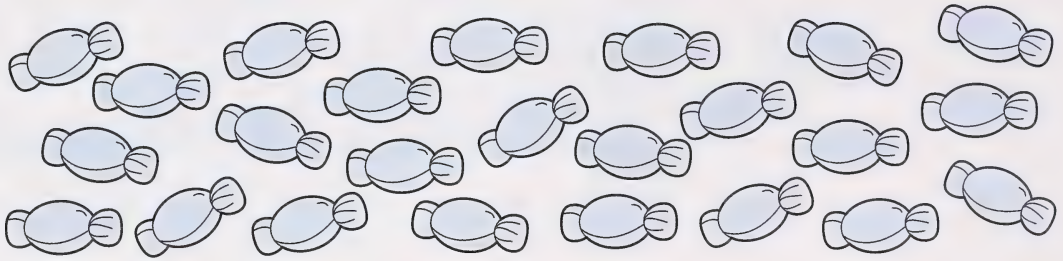
Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

LESSON 2

Allow the student to recall a strategy for solving the problem. The student may draw circles to show the groups, use counters to share the groups, or use other strategies.

Sharing a number of items to find how many groups can be made or how many items will be in a group is called division.

1. If you had to share the candies equally among 4 children, how many would each child get?

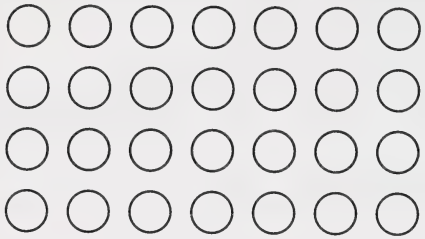


Each child would get _____ candies.

Arrays can help you find answers for division problems.

2. If there are 28 candies and they are shared equally, how many will 4 children each get?

You can use counters to stand for the 28 candies and lay them out in 4 rows to show the 4 children.



How many are in each row? _____

Each child would get _____ candies.

Division can be written in a number sentence, too.

$15 \div 3 = 5$ or $3\overline{)15}^{\,5}$

This is read as 15 shared into 3 groups equals 5 or 15 divided by 3 equals 5.

3. Write a number sentence for each problem. Draw a picture or use counters to solve the number sentences.

a. There are 2 dogs fighting over 10 bones. How many bones are there for each dog?

_____

There are _____ bones for each dog.

b. There are 3 baskets for 12 kittens. How many kittens in each basket?

_____

There are _____ kittens in each basket.

c. There are 4 boxes of doughnuts with 24 doughnuts in all. How many doughnuts in each box?

_____

There are _____ doughnuts in each box.

Now you will look at how division and multiplication are related.

4. If there are 16 stars in 4 rows, how many stars are in each row?

$16 \div 4 = 4$

There are _____ stars in each row.

5. What multiplication sentence would you write for the same array?

_____

6. How are the multiplication and division number sentences alike?

_____

_____

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

Go to Assignment Booklet 9B.

DAY 13: LOOKING BACK TO MODULE 5

Measurement was the topic in Module 5. Today's lesson will review length, area, perimeter, capacity, mass, and time.

Do you remember all about measuring?

LESSON 1

The length, width, or height of an object can be measured in centimetres, decimetres, or metres.

1. Estimate the length of the pencil below.

The pencil is about _____ centimetres or about _____ decimetres.

Take out your centimetre ruler.

2. Use your ruler to measure the pencil.

The pencil is _____ centimetres.

Small objects are usually measured in centimetres. Larger objects can be measured in decimetres. Very large objects or short distances are measured in metres.

DAY 13

Your student can review Day 1 of Module 5 to find this information.

3. a. 1 decimetre is the same length as _____ centimetres.

   b. 1 metre is the same length as _____ centimetres.

Long distances are measured in kilometres.

4. 1 kilometre is the same length as _____ metres.

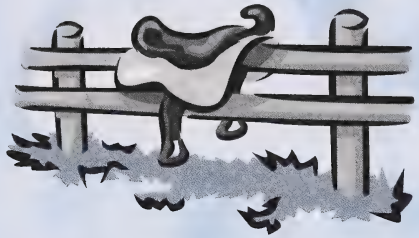
5. Write on the line the unit **centimetre**, **decimetre**, **metre**, or **kilometre** you would use to measure each object.

   a. the distance between two cities _____

   b. the distance between fence posts _____

   c. your height _____

   d. the length of an eraser _____



The length of objects can be compared and ordered.

150 cm

5 metres

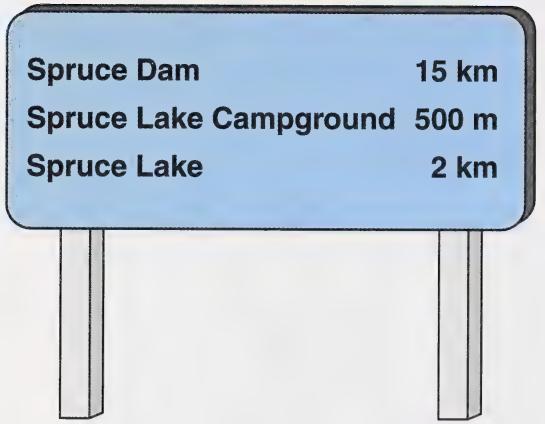
3 metres

6. Write the names of the vehicles in order from longest to shortest.

_____ _____ _____

Distance can also be compared and ordered.

Look at the road sign to the right.



7. a. Which place is closest? _____

b. Which place is farthest away? _____

Perimeter is the distance around the outside of an object or shape. You can measure the perimeter by measuring the sides and adding the length of each of these sides together.

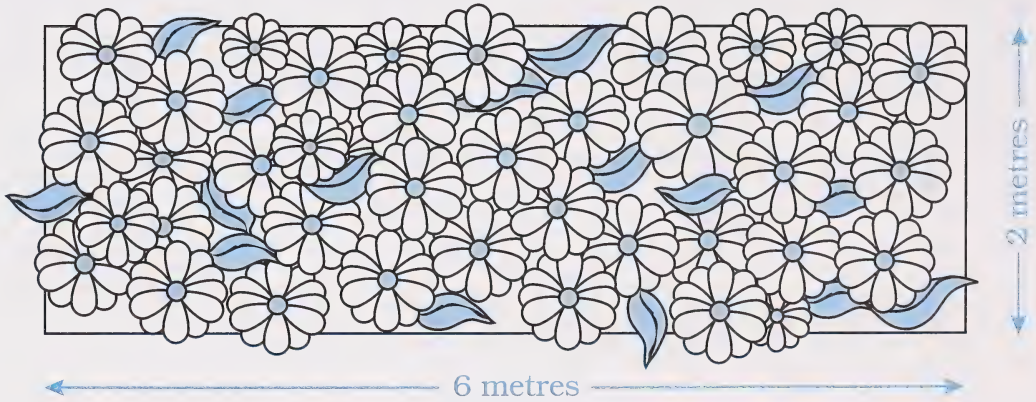
8. Use your ruler to find the perimeter of the rectangle below.

The perimeter is _____ cm.

The opposite sides of a rectangle are equal, so you can find the perimeter when you know the length and width of only two sides.

9. The perimeter of the flower bed

is _____ m.



The space inside a shape is called the area.

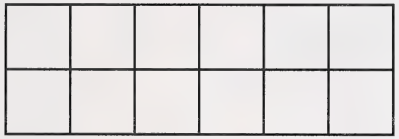
Area is discussed on Day 6 of Module 5.

The space inside a shape can be measured using square units.

10. The area of the rectangle is _____ square units.

Perimeter and area can be compared and ordered.

11. Write the area and perimeter for the following.



A

B

Area of A: _____ square units

Area of B: _____ square units

Perimeter of A: _____ cm

Perimeter of B: _____ cm

12. a. Which shape in question 11 has the larger area?

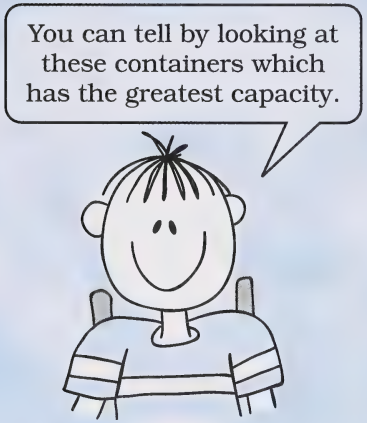
_____

b. Which shape in question 11 has the shorter perimeter?

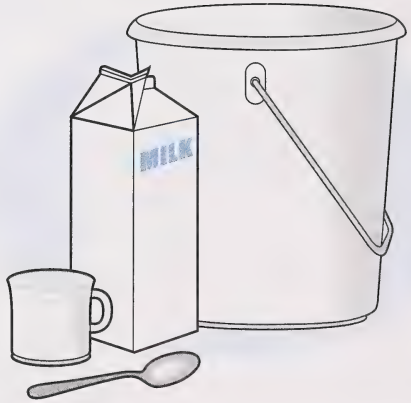
_____

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

LESSON 2



When you measure how much a container holds, you are measuring capacity.



1. Which container has the greatest capacity? _____

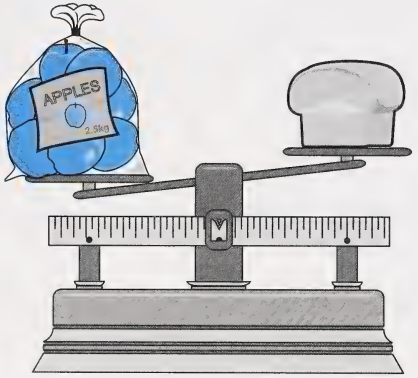
Litres can be used to measure capacity.

This 1-litre milk container holds about 4 cups of milk.

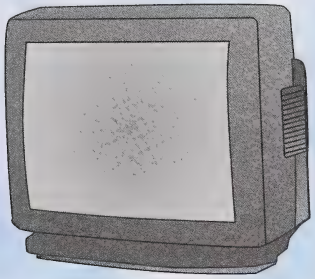
2. About how many cups would there be in a 2-litre milk container?

_____ cups

When you weigh an object, you are measuring its weight or mass.



3. Which has a greater mass, the bread or the apples? _____



Mass can be measured in grams and kilograms.

4. a. 1 gram is about as heavy as _____.

   b. 1 kilogram is about as heavy as _____.

   c. 1 kilogram is the same as _____ grams.

Grams are used to measure light objects, and kilograms are used to measure heavier objects.

5. Would you use kilograms or grams to measure the mass of each of the following:

   a. an apple _____

   b. a television set _____

   c. a pencil _____

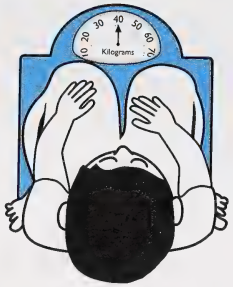
   d. a friend _____

Many different kinds of scales are used to measure mass.

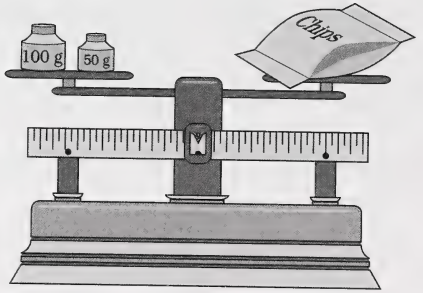
6. Write the mass of the following objects on the line below the object. Remember to use grams or kilograms.

a.

b.



c.



_____ _____ _____

d. Which of the three objects has the most mass?

_____

DAY 13

Time is measured in seconds, minutes, hours, days, weeks, months, and years.

7. a. There are _____ seconds in a minute.

   b. There are _____ minutes in an hour.

   c. There are _____ hours in a day.

   d. There are _____ days in a week.

   e. There are _____ days in a year.

   f. There are _____ days in a leap year.

8. Write the days of the week.

_____ _____ _____

_____ _____ _____

_____

9. Write the months of the year.

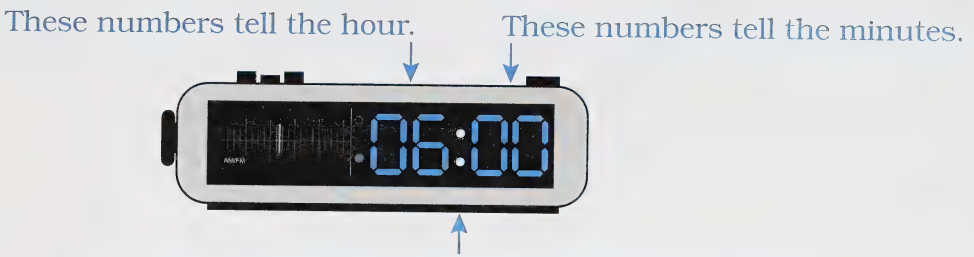
_____ _____ _____

_____ _____ _____

_____ _____ _____

_____ _____ _____

A clock is used to measure hours, minutes, and seconds. The time on this digital clock reads as 6 o'clock.



10. Read the time on the following clocks to your home instructor. Then write the time in words on the line.

a. 

_____

b. 

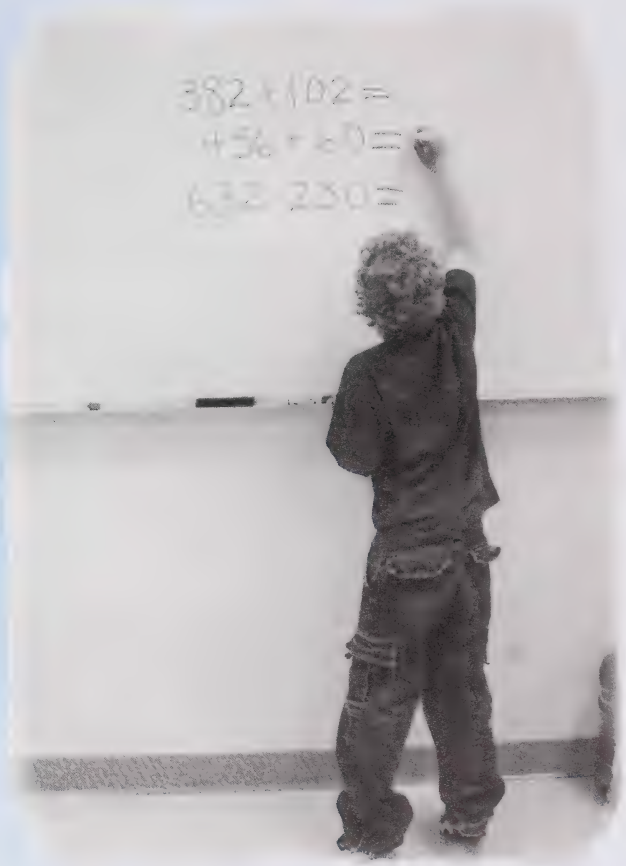
_____

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

Go to Assignment Booklet 9B.

DAY 14: LOOKING BACK TO MODULE 6

You learned how to add and subtract three-digit numbers in Module 6. In today's activities, you will review the strategies and skills that can help you solve addition and subtraction problems using large numbers.

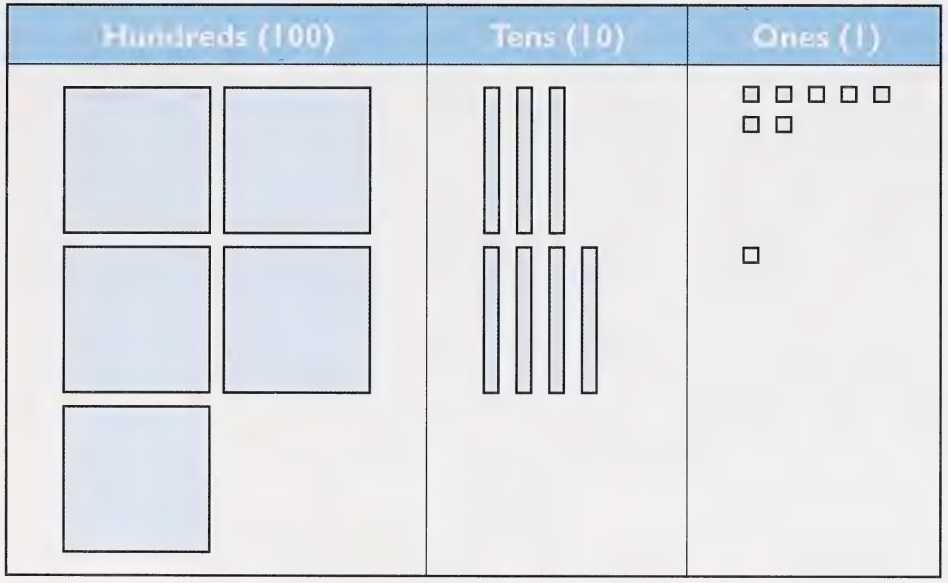


LESSON 1

You can use base ten blocks or place-value charts to help you add three-digit numbers.

You have learned many strategies to help you add. When you work with large numbers, some strategies would take too long or be too difficult.

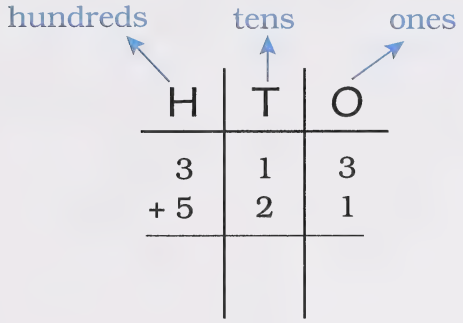
Using groups of hundreds, tens, and ones helps you add large numbers quickly.
For example: 237 + 341 = ?



1. 237 + 341 = _____

Another way to set up an addition problem is to make a simple place-value chart and write the numbers one over the other. Add the ones, then the tens, then the hundreds.

2. Complete the following example.



When you understand how to line up the ones, tens, and hundreds, you can add without a place-value chart.

3. a. 465 +134

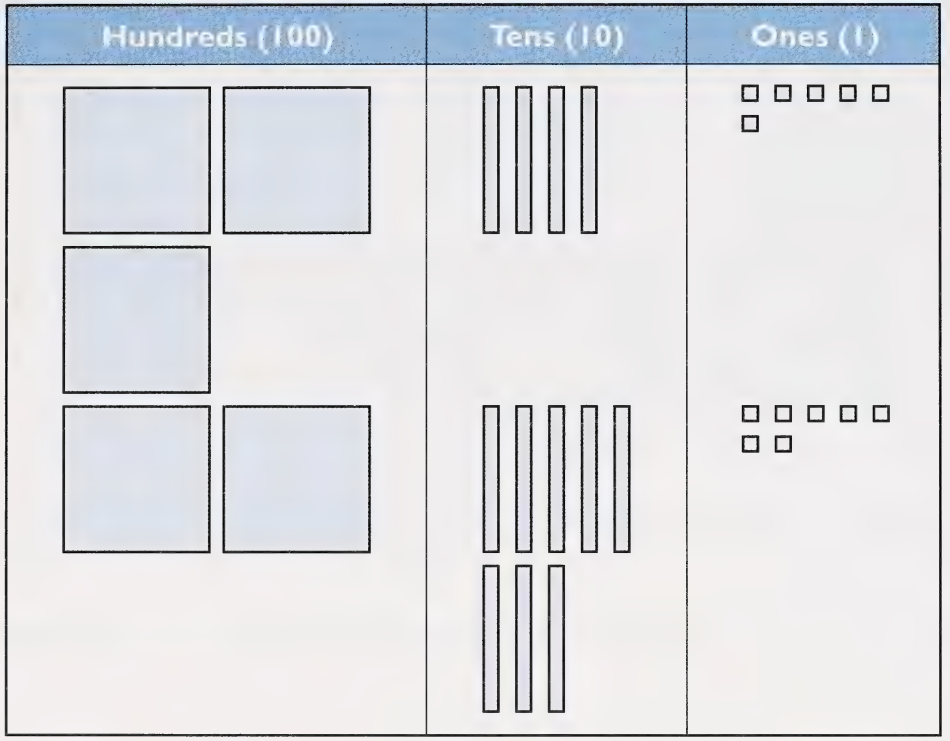
b. 392 +106

c. 518 + 60

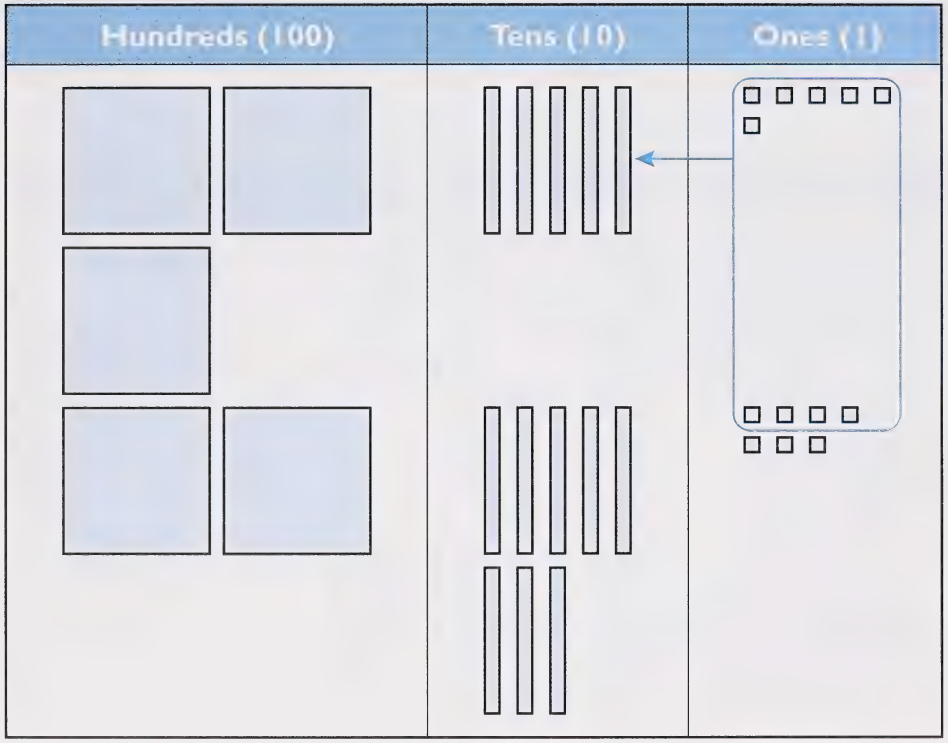
You may need to regroup when you add large numbers.

When there are ten or more ones, tens, or hundreds you need to regroup them.

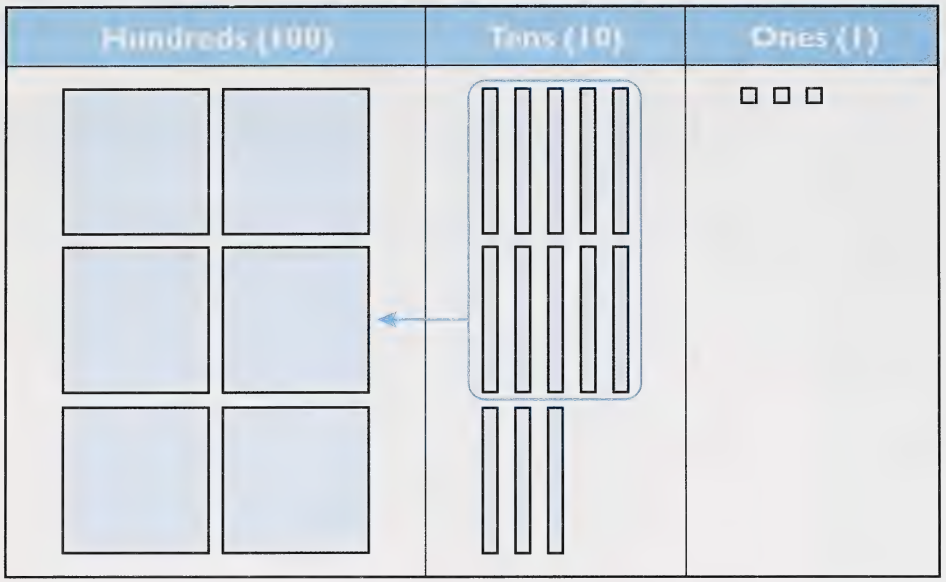
For example: 346 + 287 = ?



Begin by trading 10 ones for a tens rod and add it to the tens column.



Now you have too many tens. Trade 10 tens for one hundred flat, and add it to the hundreds column as follows.



4. 346 + 287 = _____

The pencil-and-paper method shows regrouping by writing the regrouped tens, ones, or hundreds above the numbers.

5. Solve the following problems using regrouping. The first one is done for you.

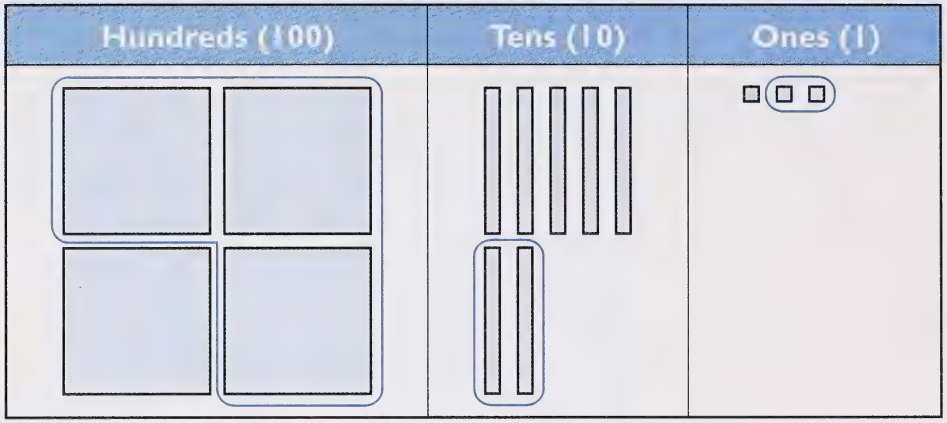
a. $\overset{1\,1}{376} + 545 = 921$

b. $435 + 429 =$ _____

c. $690 + 184 =$ _____

d. $783 + 58 =$ _____

Subtraction problems can be solved using the same strategies. For example, you could set up 473 – 322 = ? as follows.



6. 473 – 322 = _____

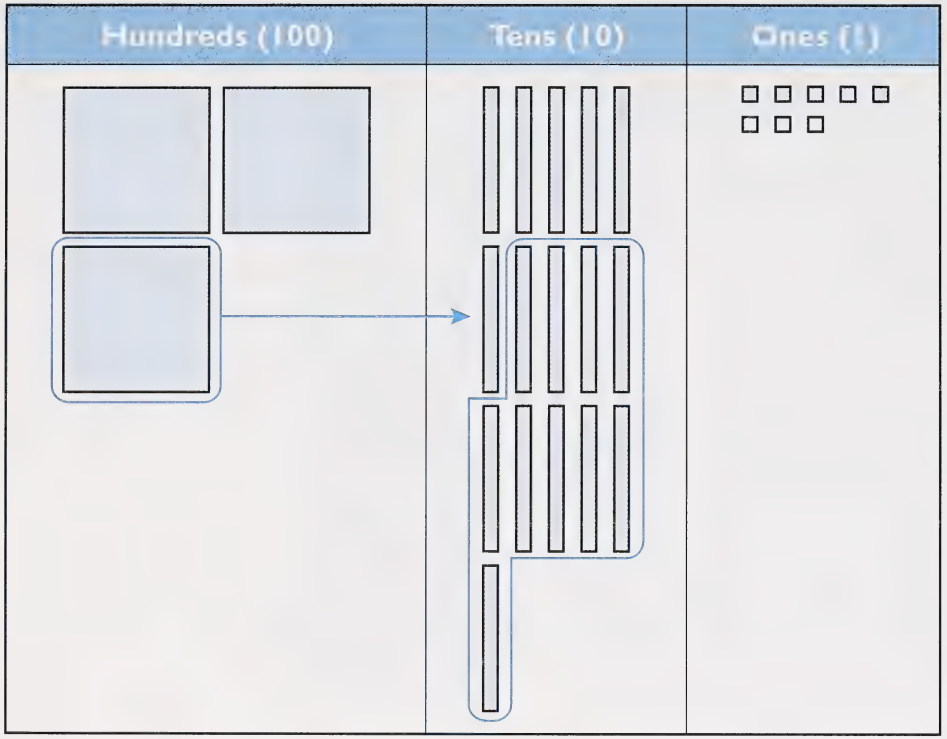
7.

H	T	O
8	7	6
– 5	4	5

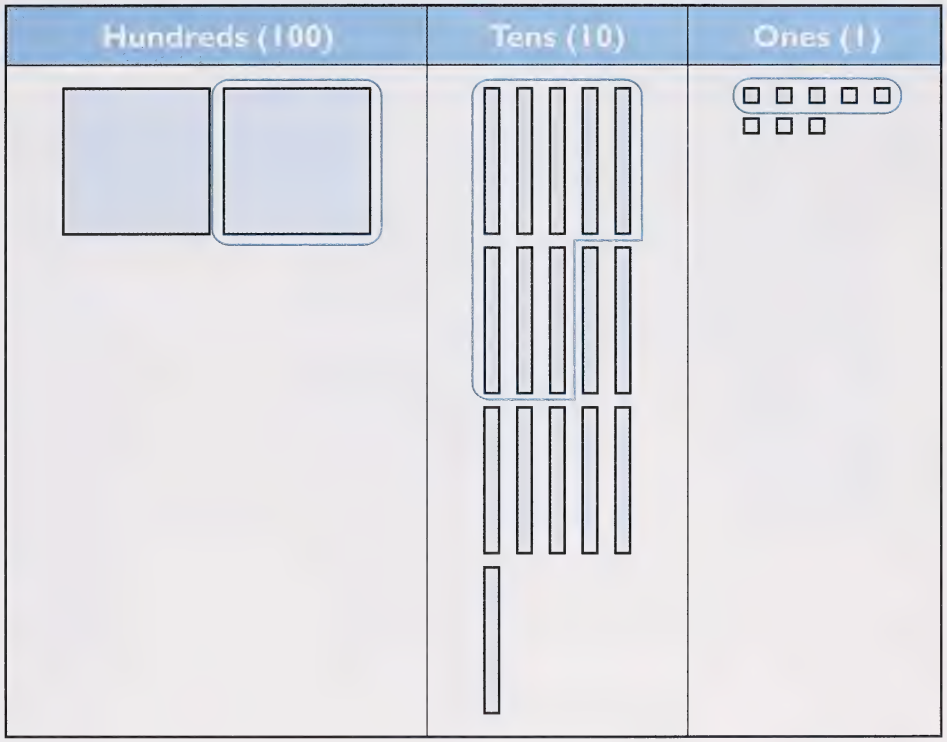
The student may require more help to align the correct values and to regroup.

Sometimes you may need to regroup for subtraction problems, too.

For example, to subtract 368 – 185, you can take away the 5 ones, but you don't have enough tens to take away 8 tens or 80. You must trade a one hundred flat for 10 tens as follows.



Now you can take away the hundreds, the tens, and the ones.



8. 368 –185 = _____

You can use the pencil-and-paper method to show regrouping.

If there aren't enough ones, trade a ten for 10 ones as follows.

9. Find the answer.

$$\begin{array}{r} {\scriptstyle 6\ 1} \\ 8\not{7}3 \\ -\ 545 \\ \hline \end{array}$$

This method is the quickest one for me. I set up my regrouping and then just use my math facts.

You can use mental math strategies to add and subtract, too.

For example, try 500 – 398 = _____

Sometimes I add or subtract the same number from each side of the equation to make a problem easier. For example, if I add 2 to 398 it makes 400, and 500 – 400 is 100. I added two to 398, so I add 2 to 100. 100 + 2 = 102. So, 500 – 398 = 102.

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

LESSON 2

There are several ways to check answers to problems.

You can estimate, perform the opposite operation, or use a calculator to check your answers.
You can round to the nearest hundred or nearest ten to estimate to find if your answer is reasonable.

386	round to the nearest ten →	390
− 212	round to the nearest ten →	− 210
174 ← exact answer		180 ← estimated answer

1. Round each number to the nearest ten to find the estimated answer.

529	round to →	_____
− 304	round to →	− _____
← exact answer		← estimated answer

You can also check subtraction questions by performing the opposite operation or adding.

376
− 218
158

If you add the last two numbers of the equation, the answer should be the same as the first number in the equation.

218
+ 158
376

You can check addition questions by subtracting.

$$\begin{array}{r} 584 \\ +\ 298 \\ \hline 882 \end{array}$$

If you subtract the second addend from the sum, you should get the first number in the equation.

$$\begin{array}{r} 882 \\ -\ 298 \\ \hline 584 \end{array}$$

If you use a calculator to check answers, be sure to push the keys carefully.

For example, 537 – 429 = ? would look like this.

2. 537 – 429 = _____

When you add or subtract money, use a decimal to show dollars and cents.

The dollar sign comes first. → $1.15

This dot is called a decimal point.

Check Module 6 , Day 16 for additional information on doing money calculations.

You can add or subtract money just like any other problem.

$$\begin{array}{r} \$2.00 \\ +\ \$1.05 \\ \hline \$3.05 \end{array}$$

First add the cents.

Add the dollars and write the dollar sign.

Write a decimal to show you are working with money.

3. Do the following money calculations:

a. $\$3.79 - \$2.05$

b. $\$6.45 + \$1.13$

c. $\$4.64 - \$2.28$

Remember to write the dollar sign and the decimal point in the correct place in each answer.

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

Are you ready for your timed exercise? Ask your home instructor to time you for 2 minutes. Check your own work. Remember to record your scores here and on your Math Facts Graph from the Appendix.

TIMED EXERCISE: 2 MINUTES

14 – 6 = _____ 13 – 7 = _____ 17 – 9 = _____ 10 – 3 = _____ 12 – 6 = _____ 15 – 9 = _____ 8 – 5 = _____

11 – 8 = _____ 15 – 7 = _____ 12 – 4 = _____ 9 – 2 = _____ 11 – 3 = _____ 13 – 6 = _____ 10 – 5 = _____

14 – 7 = _____ 6 – 2 = _____ 13 – 4 = _____ 10 – 7 = _____ 9 – 3 = _____ 16 – 8 = _____ 12 – 5 = _____

13 − 6	10 − 8	12 − 7	14 − 5	11 − 4	16 − 9	15 − 8
11 − 2	18 − 9	14 − 8	10 − 4	13 − 5	9 − 6	12 − 3

Go to Assignment Booklet 9B.

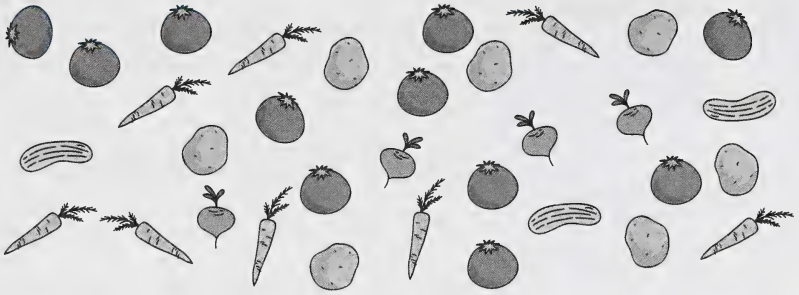
Number completed	
Number correct	

DAY 15: LOOKING BACK TO MODULE 7

In Module 7, you practised reading and understanding different kinds of graphs. You learned how to make graphs of your own too. You also had some fun working with games and spinners as you learned about chance.

You learned that data is information that can be collected and organized. When data is gathered, tally marks can be used to record amounts.

Vegetables Sold



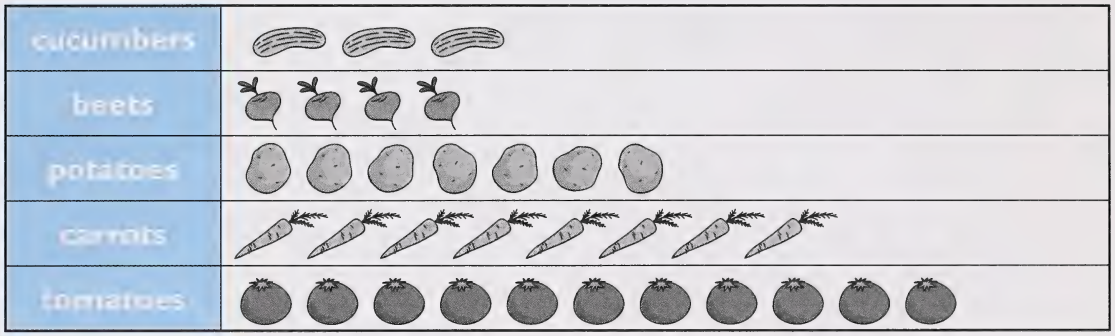
1. Use tally marks and find the totals to record each of the vegetables sold.

Vegetable	Number Sold	Total
potatoes		
tomatoes		
cucumbers		
beets		
carrots		

Then the data or information can be displayed in a graph.

After the data was collected about the vegetables at the market, it was displayed in a pictograph to make it easier to understand.

Vegetables Sold

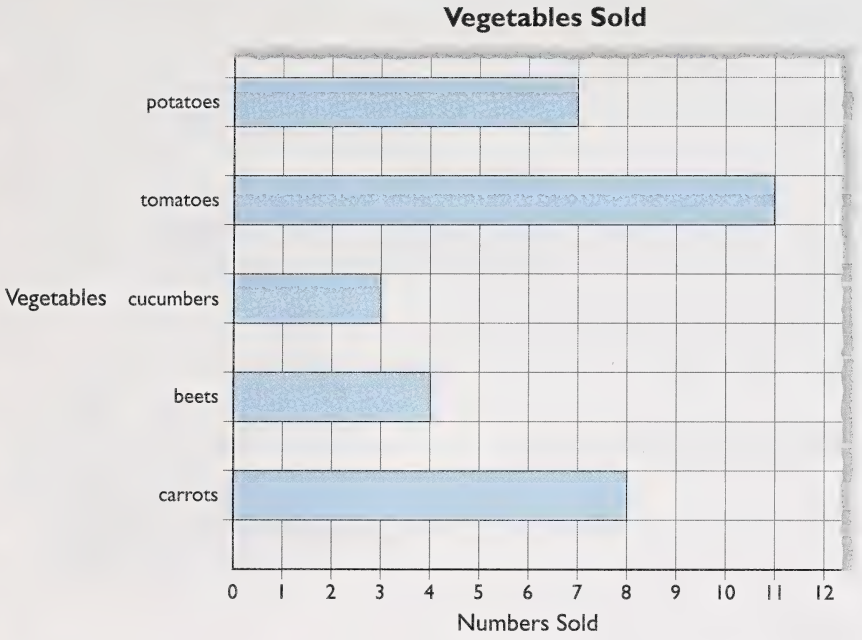


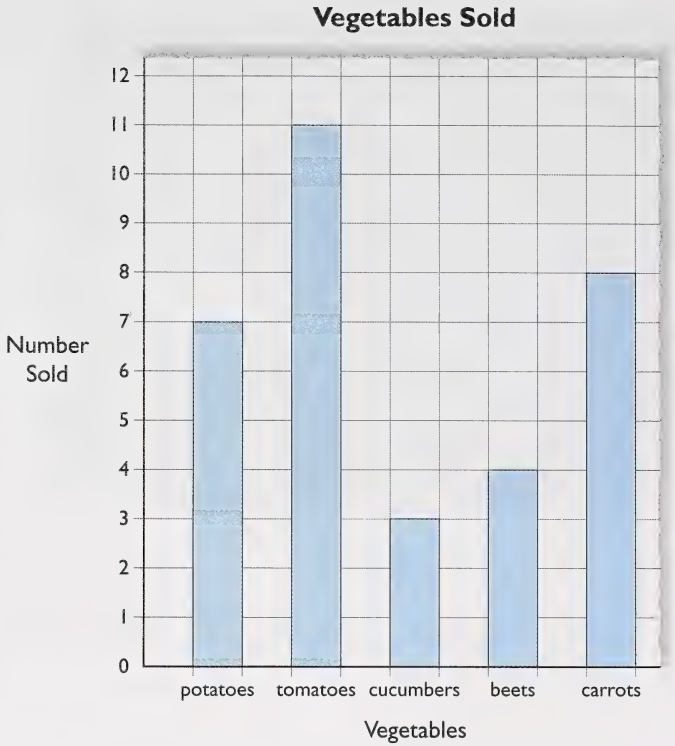
Pictographs use pictures to represent items. The **Vegetables Sold** pictograph uses one picture to represent one item. In some pictographs, one picture may stand for more than one item.

Refer the student to Days 2, 3, 4, and 5 of Module 7 to further review graphs.

There are many different kinds of graphs.

Bar Graphs can be made with bars going across the page (horizontally) or up and down the page (vertically).





Graphs make it easy to compare and rank data.

When you look at a pictograph or a bar graph it is easy to compare amounts.

Look at the vertical bar graph and the horizontal bar graph on the previous page.

2. What was the best-selling vegetable? _____

3. The vegetable they sold the least number of was _____.

You can use the information on a graph to make predictions about similar problems.

Look at the **Vegetables Sold** graphs again. You can make predictions based on the data in the graph.

4. Which vegetable would you predict to be the best-selling vegetable for the summer?

_____

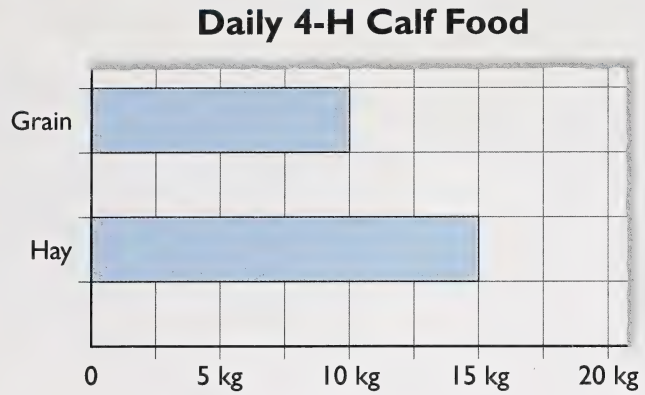
5. What prediction could you make about tomatoes for the next market day?

_____

6. What prediction would you make about cucumbers for the next day?

_____

You can find out new things from a graph by adding, subtracting, multiplying, or dividing.



7. a. Sarah's calf eats _____ kg of grain each day.

   b. Sarah's calf eats _____ kg of hay each day.

8. How could you find out how much grain Sarah's calf eats in two days? _____

9. Calculate how much grain Sarah's calf would eat in a week. Show your work.

_____

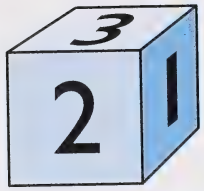
_____

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

LESSON 2

You learned how to describe the chance of an event happening by using different words.
You can predict whether it is likely, unlikely, certain, or impossible that an event will happen.

Sarah rolls a cube numbered 1, 1, 2, 2, 3, 3.



1. Write **likely, unlikely, certain, or impossible** to describe the chances that the following events will happen.

   a. She will get a 4. _____

   b. She will get a 1 or a 2. _____

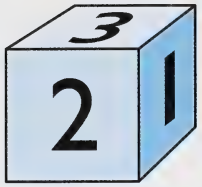
   c. She will get a 3 ten times in a row. _____

   d. She will get a 1, 2, or a 3. _____

You can collect information about outcomes to check your predictions.

Sarah rolls the cube 10 times and records how many times each number turns up.

Outcome	Tally
1	////
2	///
3	///



2. Use the information in Sarah's tally chart to answer the following questions.

   a. How many times did a 3 turn up? _____

   b. How many times did a 1, 2, or 3 turn up? _____

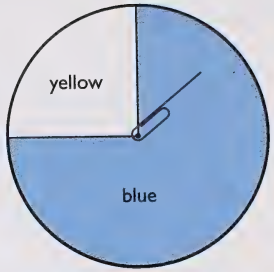
   c. How many times did a 4 turn up? _____

You can use the information on the chart to check the predictions you made in question 1.

Experiments can be designed to make some outcomes more likely than others.

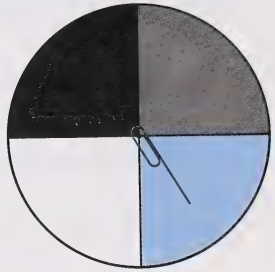
The chance of an outcome happening depends on the design of the spinner, cube, or event.

3. When you spin a paper clip on this spinner, it is more likely that you will land on the blue section.



Why? _____

4. When you spin a paper clip on this spinner, it is equally likely that you will land on each coloured section.



Why? _____

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

Go to Assignment Booklet 9B.

DAY 16: LOOKING BACK TO MODULE 8

In Module 8, you learned about shape, space, and temperature, too.

You worked with 2-dimensional shapes and 3-dimensional objects. You learned about faces, edges, and vertices. Map skills were also practised.

You found out how to read a thermometer as well. Think about all the things you learned in Module 8.

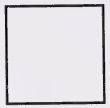
LESSON 1

Objects can be compared and classified by their shape.

Two-dimensional, or 2-D shapes, have height and width only.

1. Write the name of each 2-D shape.

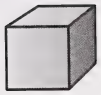




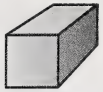
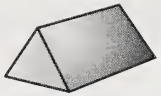

_____ _____ _____ _____

You learned the names for some three-dimensional or 3-D solids.

2. Write the name under each geometric solid.



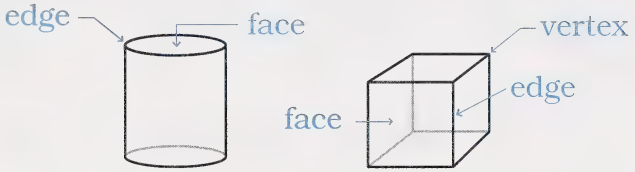

_____ _____ _____ _____

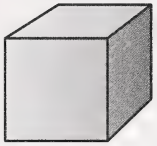
_____ _____ _____ _____

_____ _____ _____ _____

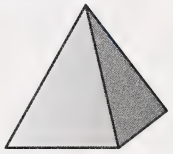
You can count the faces, vertices, and edges to compare solids.



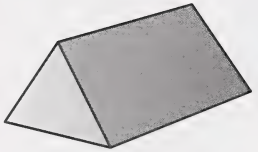
The faces of 3-D solids are made up of 2-D shapes.



Each face is a square.



The faces are triangles and a square.



The faces are triangles and rectangles.

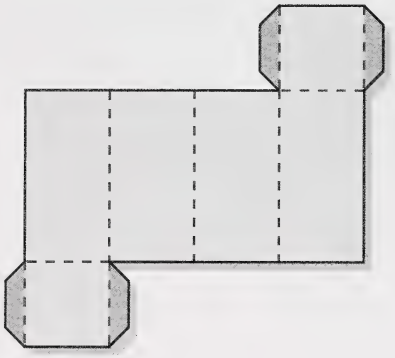
3. Look at the following chart. Tell how many faces, edges, and vertices each has.

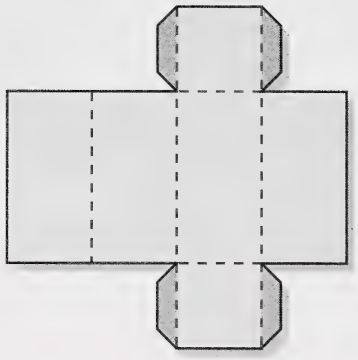
	Faces	Edges	Vertices
			
			
			

4. Compare and contrast the triangular prism and the rectangular pyramid. How are they alike? How are they different?

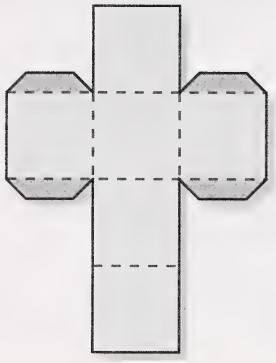
A net can be created to show the faces of a geometric solid.

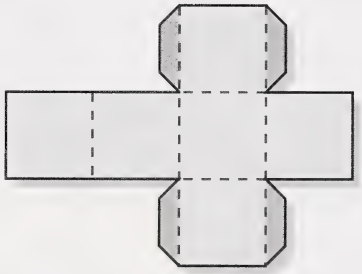
When you cut apart a rectangular prism, you can make different nets.





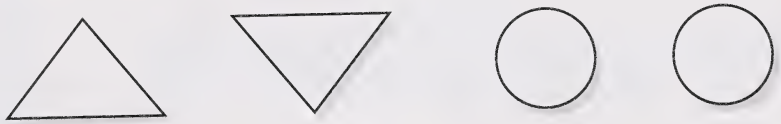
5. Write the solid that could be made from each of the following nets.



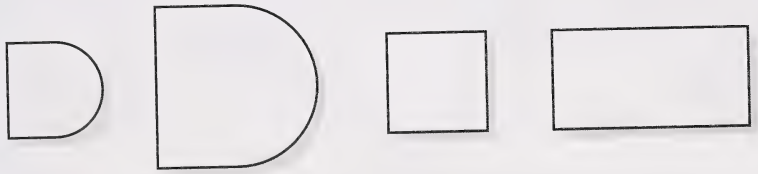


_____ _____

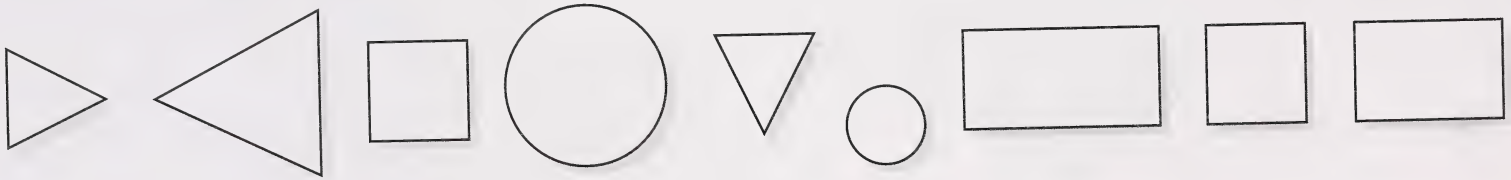
Figures can be described as congruent. Do you remember what congruent means? Yes, it means the figures are the exact same size and shape. These figures are congruent.



The following figures are not congruent. The first two are the same shape but not the same size. The second two are not the same shape.

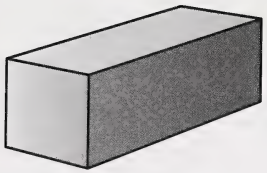


6. Which of the following shapes are congruent? Circle the congruent shapes and write a sentence to tell which shapes are congruent.



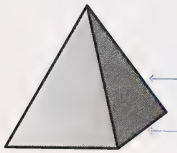
Solids have congruent faces.

Look at this rectangular prism.



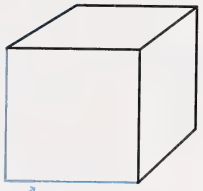
7. Where do you find the congruent faces on this prism?_____

Geometric figures may have edges or lines that intersect. That means the edges meet or cross.



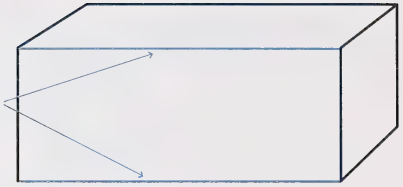
These lines or edges intersect at the bottom corner.

Perpendicular edges intersect to make a square corner.



These two edges are perpendicular to each other. They meet to make a square corner.

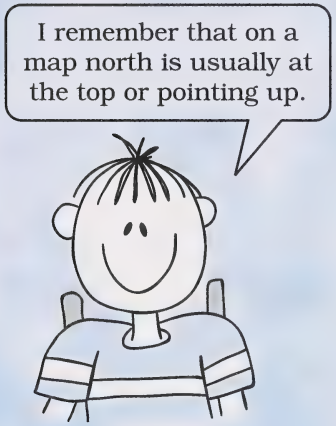
Parallel edges do not intersect.



These two edges do not meet.
They are parallel.

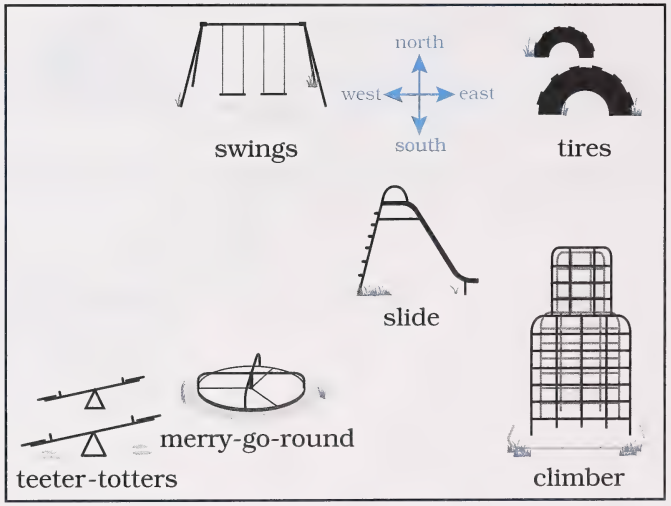
Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

LESSON 2



Maps can be created to describe locations of objects or places.

The directions north, east, south, and west make maps easier to understand.



1. Use the map of the playground to answer the following questions.

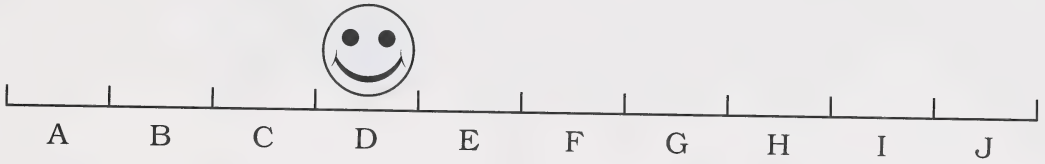
   a. Are the swings **north** or **south** of the merry-go-round? _____

   b. What is on the east side of the swings? _____

   c. On what side of the climber are the teeter-totters? _____

Lines and grids can make it easier to pinpoint a spot or place on a map.

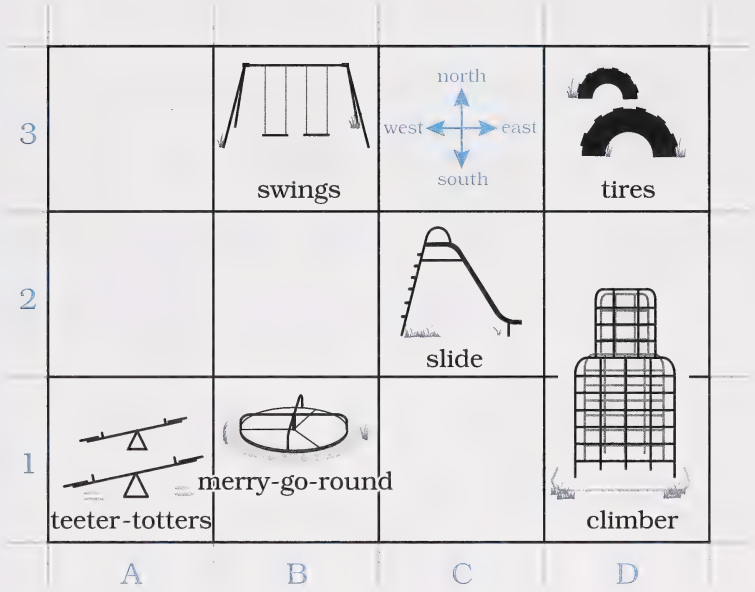
This line is divided into sections. It makes it easy to tell someone where the happy face is.



2. Where is the happy face? _____

3. Pretend you have to move the happy face four spaces to the right. What section would the happy face be in then? _____

Maps are sometimes divided into a grid with lines. This makes rows and columns. It is easy to find or describe a position on a grid.



4. a. What is in row 1 column A? _____

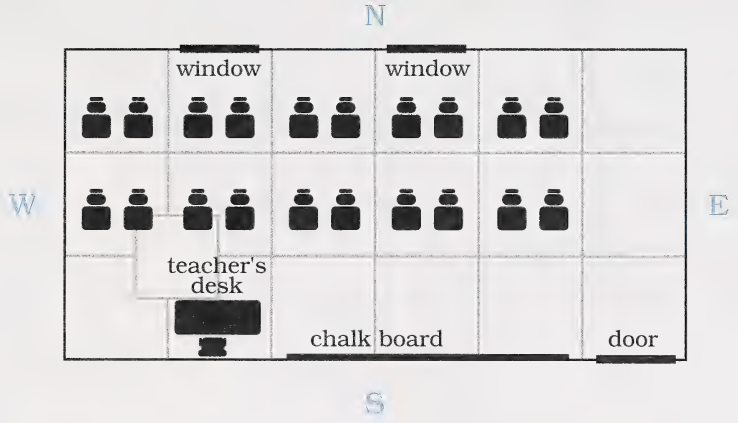
   b. Tell where the swings are. Use the row and column numbers. _____

   c. Use the row and column numbers to tell where the slide is. _____

   d. Draw a wading pool in section 3A.

You can use a grid or directions to make a path on a map.

5. Look at the following map of a classroom. Draw a path on the map with your pencil by carefully following the directions written below the map.



- Start at the door of the classroom.
- Go north 3 spaces.
- Go west 2 spaces.
- Go south 2 spaces.
- Go west 1 space and make an ✗ in that space.

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

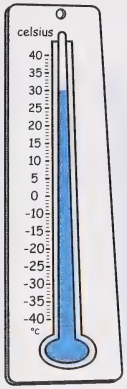
LESSON 3

Temperature can be measured using a thermometer.

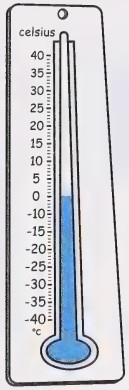
You can tell if it is a hot or a cold day with your senses, but to find the exact temperature you need a thermometer.

Temperature is measured in units called degrees Celsius. Degrees Celsius can be written as °C.

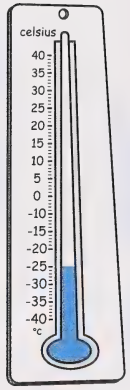
Read each of the following thermometers and the sentence below each.



30°C is a hot day.

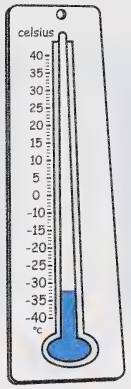


Water freezes at 0°C.



It is a very cold day at –25°C.

1. Read the temperature on each of the following thermometers, and write the temperature on the line. Then tell what kind of clothes you would wear if it was that temperature outdoors.

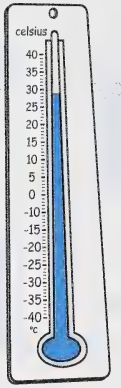
a. 

Temperature: _____

I would wear _____

_____

_____

b. 

Temperature: _____

I would wear _____

_____

_____

Use the "Answer Key the to Self-Marking Activities" in the Appendix to check your work.

Go to Assignment Booklet 9B.

DAY 17: LOOKING BACK TO MODULE 9

In the first part of this module, you worked with coins and bills. Do you remember how to pay for purchases and how to make change?

Different coins and bills have different values.

1. Write the value of each coin and bill in numbers.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

It is usually best to count the larger coins or bills in a collection first and then count on for the smaller coins and bills.

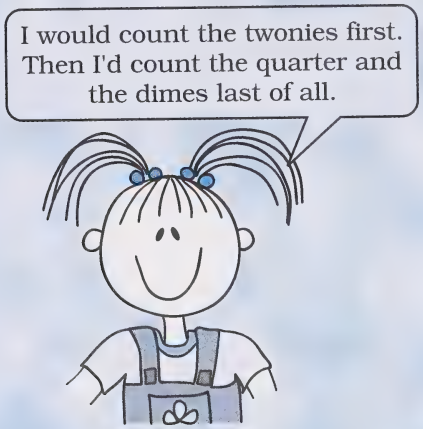
2. How much money is in each collection?

a. 

Value: _____

b. 

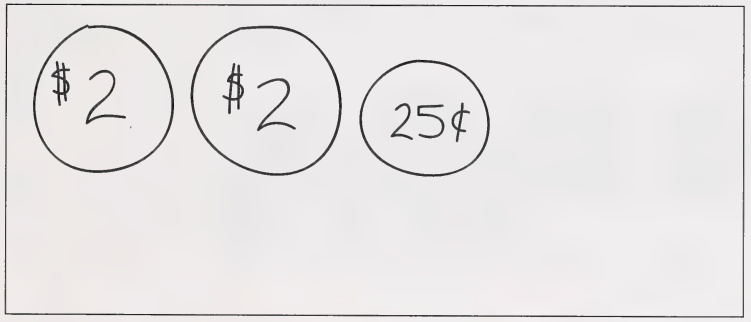
Value: _____



A certain value of money can be shown in many ways.

There are different combinations of coins you could use to make $1.45. Here are three different ways.

In each of the following boxes, show a combination of coins or coins and bills to make $4.85. Use circles and rectangles labelled with the correct value. The first one is started for you.

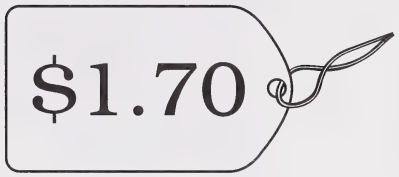


Now show $5.17 in two different ways in the following boxes.

Ask your home instructor to check your drawings.

To give change for a purchase, you can subtract or count back the change. When you count back the change, you start at the purchase price and count up to the amount that was given.

If you were given a $5.00 bill for a $1.70 purchase, you would count as follows:



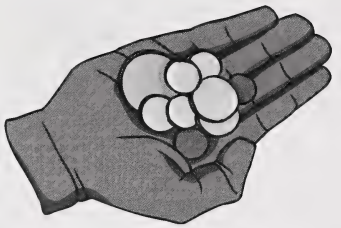
purchase price

$1.75 $2.00 $4.00 $5.00

If you subtracted the purchase price from the money given, it would look like this.

$$\begin{array}{r} \$5.00 \\ -\ \$1.70 \\ \hline \$3.30 \end{array}$$

Then you would give back $3.30 change using the fewest possible coins or bills.



Draw the coins or coins and bills in the following boxes to show the change you would give back for each purchase.

You are given 

for a $3.90 purchase.

You are given 

for a $2.05 purchase.

You are given 

for a $1.25 purchase.

Ask your home instructor to check each amount.

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

Are you ready for your timed exercise? Ask your home instructor to time you for 2 minutes. Write how many you complete.

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

Remember to record your scores here and on the Math Facts Graph from the Appendix.

TIMED EXERCISE: 2 MINUTES

$7 \times 1 =$ _____ $5 \times 5 =$ _____ $9 \times 2 =$ _____ $6 \times 4 =$ _____ $8 \times 5 =$ _____ $3 \times 4 =$ _____ $0 \times 7 =$ _____

$6 \times 1 =$ _____ $7 \times 5 =$ _____ $3 \times 6 =$ _____ $7 \times 7 =$ _____ $6 \times 7 =$ _____ $4 \times 8 =$ _____

9 × 3	4 × 5	6 × 6	8 × 2	7 × 4	0 × 1
3 × 8	5 × 2	6 × 5	8 × 4	7 × 3	8 × 1

Go to Assignment Booklet 9B.

Number completed	
Number correct	

DAY 18: FINISHING UP

Congratulations, you are on the last day of the Grade Three Mathematics program! Today you will have a chance to try a practice test.

Read the description, instructions, and sample questions with your student. Answer any questions the student has.

Some information and instructions follow that will help you with the multiple-choice section of the Grade Three Provincial Achievement Test. First, read this information with your home instructor. After the two example questions, you will begin a practice test.

SECTION 2: MULTIPLE-CHOICE

Description

The multiple-choice section has two parts as follows:
Part A has 20 questions.
Part B has 20 questions.

You have 60 minutes to complete this test. Your home instructor will give you a break between each part. You may take up to 30 extra minutes to complete the test (15 minutes for each part) if you need it.

Instructions

- You will need a pencil, eraser, and ruler.
- Follow along as your home instructor reads the story that comes at the beginning of each part.
- Read each question carefully.
- You may use scrap paper, manipulatives, or a calculator to work out your answers.

- Choose the **best** or **correct** answer.
- Mark your answer by filling in the circle next to the answer you choose. Look at the examples to see how to do this.
- If you change an answer, erase your first mark **completely**.
- Try to answer every question.

Example Question 1:

At the hot dog stand, they sold 274 hot dogs in one week. They sold 325 hot dogs the next week.

In two weeks how many hot dogs did they sell?

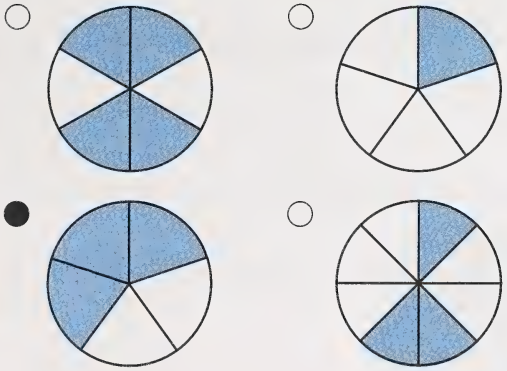
○ 51
○ 591
● 599
○ 691

The correct answer in this example is **599**. The circle in front of the correct answer has been filled in.

Example Question 2:

Sarah and Luke ate $\frac{3}{5}$ of a pie.

Which pie is $\frac{3}{5}$ shaded?



The correct answer in this example is  . The circle beside the correct answer has been filled in.

Remember to mark only one answer for each question. Do not make any other marks on the pages.

You will now begin Part A of the practice test with your home instructor. After you follow along with the story, you will work to complete all the questions on your own in Part A. Your instructor will tell you when the time is up.

Time your student as instructed in the test. Allow a break at the end of Part A. If your student needs extra time, allow an extra 30 (15 minutes for each part) minutes to complete the practice test.

DAY 18

PART A

Luke's Vacation with Sarah's Family

Luke was finally on the train going to Sarah's farm. He could hardly wait to get there.

They would be doing many things that Luke had not done before. He would see farm animals for the first time.

Even riding the train was a new and exciting experience!

1. On the way to the farm, Luke counted 33 railroad crossing signs. There were 14 with flashing lights. The rest had no lights.

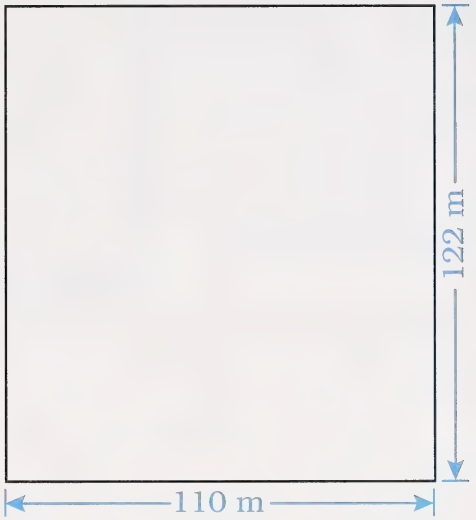
   How many railroad crossings had no lights.

   ○ 18
   ○ 19
   ○ 21
   ○ 29

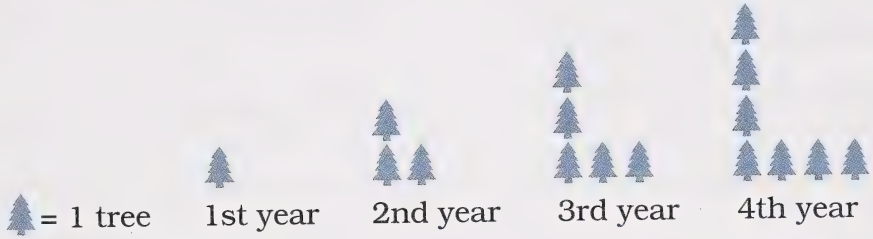
2. The first thing Luke saw when he got to the farm was a fence around the yard.

   The distance around the yard is

   ○ 222 m
   ○ 132 m
   ○ 464 m
   ○ 440 m



3. One year Sarah's family planted a tree in their yard. Each year after that they planted two trees. The trees are planted in the pattern shown below.



What will the trees look like in the 7th year?

4. Sarah's mom sells one dozen eggs for $2.18.

   She sells three dozen eggs for

   ○ $6.36
   ○ $6.34
   ○ $6.44
   ○ $6.54

5. Sarah's family plants vegetables.

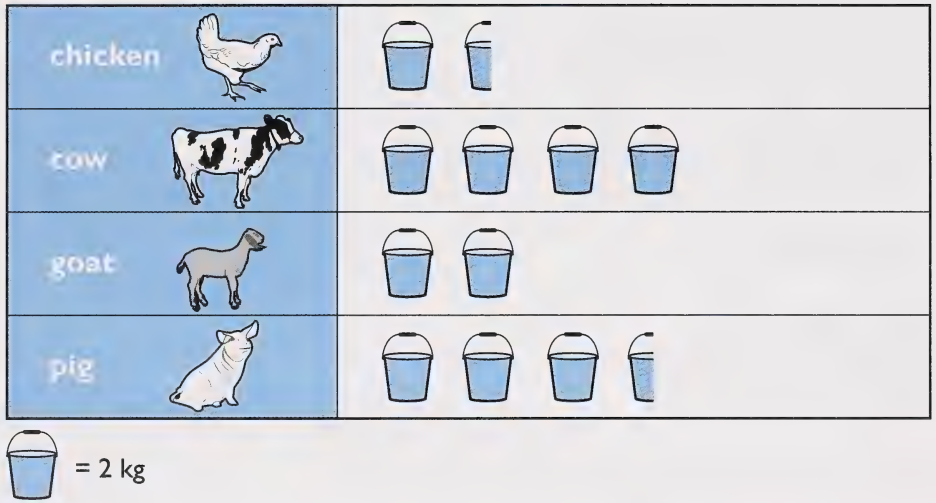
   They plant lettuce before peas.
   They plant corn after peas.
   They plant potatoes before lettuce.

   In what order does Sarah's family plant the vegetables?

   ○ potatoes, corn, peas, lettuce
   ○ potatoes, lettuce, peas, corn
   ○ peas, corn, lettuce, potatoes
   ○ lettuce, peas, corn, potatoes

Use this pictograph to answer questions 6 and 7.

Amount of Feed Animals Eat



6. How many kilograms of feed do these animals eat in all?

- ○ 11 kg
- ○ 12 kg
- ○ 24 kg
- ○ 22 kg

7. How many more kilograms of feed do the cows eat than the chickens?

- ○ 5 kg
- ○ 8 kg
- ○ 4 kg
- ○ 10 kg

8. Chicken feed is sold in bags.

Which row of money indicates the cost of one bag of chicken feed?

○ 

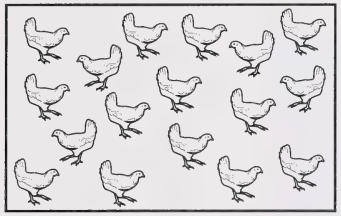
○ 

○ 

○ 

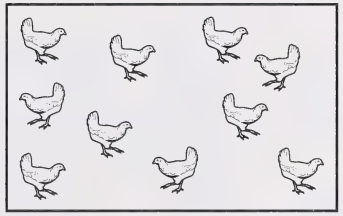
9. Sarah has four pens of chickens as follows. Each pen has a different number of chickens.

A



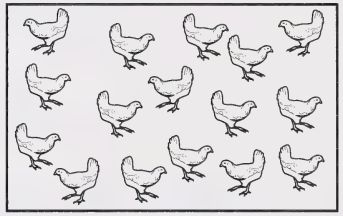
17 chickens

B



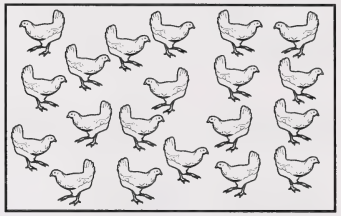
10 chickens

C



16 chickens

D



20 chickens

Which pen has an odd number of chickens?

- ○ A
- ○ B
- ○ C
- ○ D

10. Sarah has 30 rabbits. She has 5 pens. She puts an equal number of rabbits in each pen.

How many rabbits are in each pen?

- ○ 5
- ○ 6
- ○ 7
- ○ 8

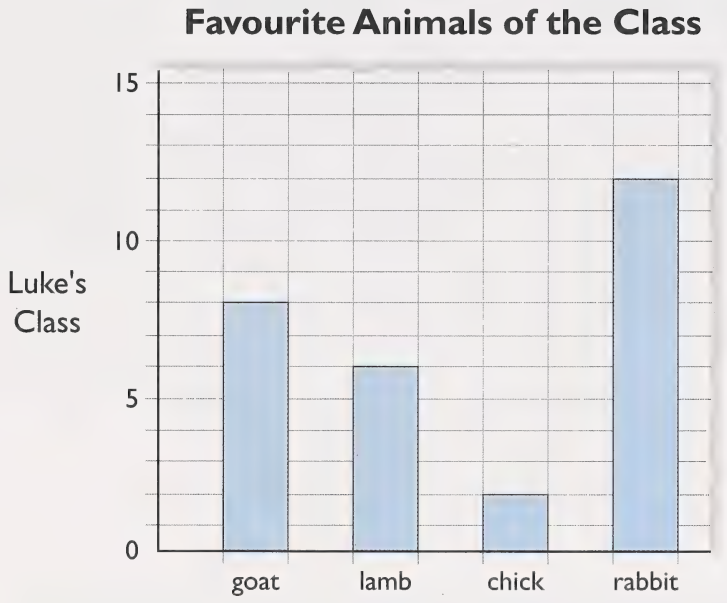
11. Sarah is going to give each of the 30 rabbits one carrot.

    Each package of carrots holds 10 carrots.

    How many packages of carrots does Sarah need?

    ○ 30
    ○ 10
    ○ 2
    ○ 3

Use the information in the following graph to answer questions 12 and 13.



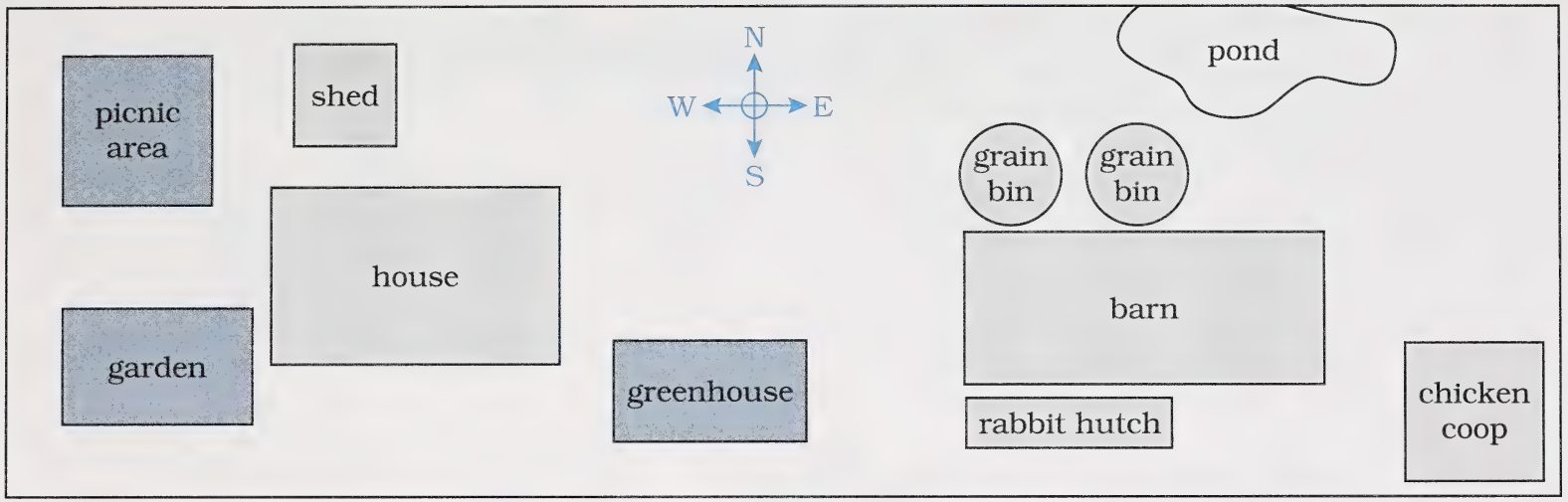
12. How many people voted altogether?

- ○ 12
- ○ 15
- ○ 27
- ○ 28

13. Which group of tallies matches the data in the **"Favourite Animals of the Class"** graph?

○	𝍸 𝍸 goat	𝍸 || lamb	|| chick	𝍸 𝍸 𝍸 rabbit
○	𝍸 |||| goat	𝍸 || lamb	|| chick	𝍸 𝍸 || rabbit
○	𝍸 ||| goat	𝍸 | lamb	|| chick	𝍸 𝍸 || rabbit
○	𝍸 | goat	𝍸 ||| lamb	|| chick	𝍸 𝍸 || rabbit

Use the following map of the farmyard to answer questions 14 and 15.



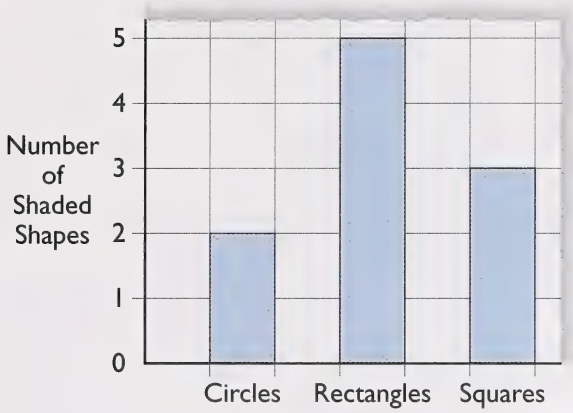
14. Sarah walks from the picnic area to the shed.

In which direction does she walk?

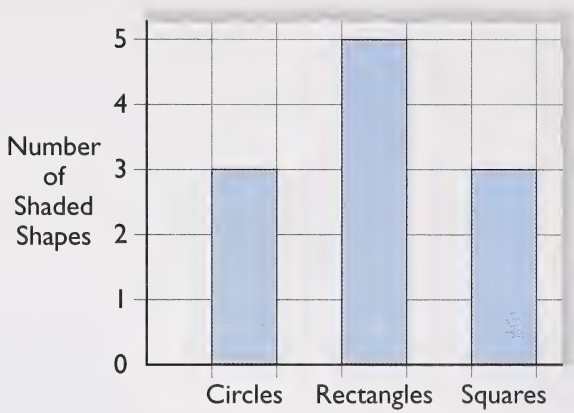
- ○ north
- ○ east
- ○ south
- ○ west

15. Which graph shows the correct number of each shape on the map of the farmyard?

○



○



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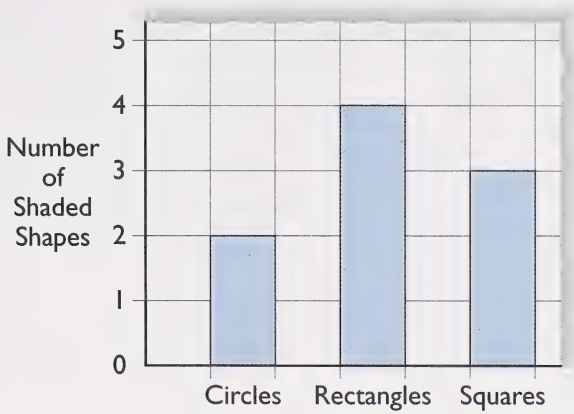

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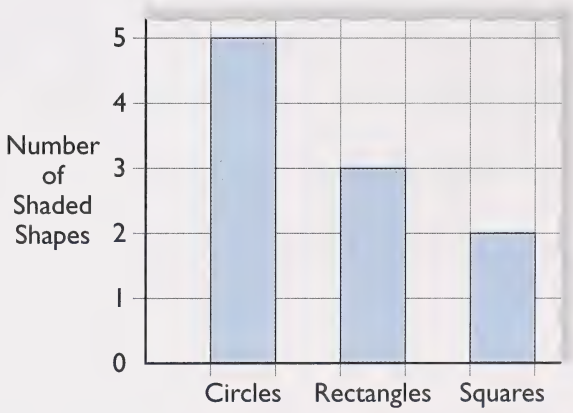
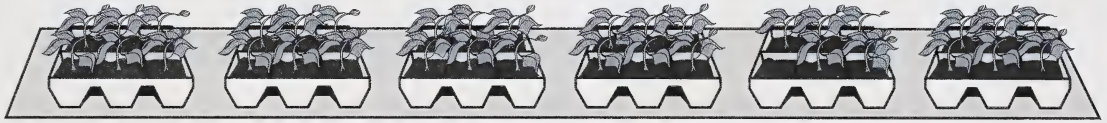


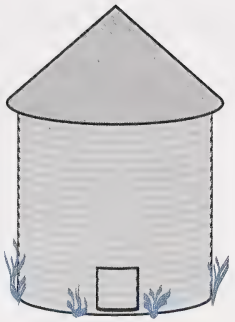
16. Sarah and her mother planted 6 tomato plants in each tray in the greenhouse. There are six trays.



Which equation shows how to find the total number of tomato plants?

- ◯ 6 – 6 =
- ◯ 6 × 6 =
- ◯ 6 ÷ 6 =
- ◯ 6 + 6 =

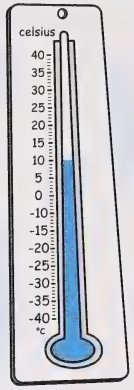
17. This is one of the grain bins on the farm.



The solids that make the grain bin are a

- ◯ triangular and a rectangular prism
- ◯ cube and a triangular prism
- ◯ pyramid and a cylinder
- ◯ cone and a cylinder

18. In the morning the temperature was 10°C.



In the afternoon the temperature is 21°C.

How many degrees warmer is it in the afternoon than in the morning?

- ◯ 12°C
- ◯ 11°C
- ◯ 13°C
- ◯ 21°C

19. Luke got to the farm on June 3.

One week and three days later, they left for their camping holiday.

They left for their holidays on

- ◯ June 8
- ◯ June 15
- ◯ June 13
- ◯ June 12

JUNE						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

20. Luke and Sarah play games in the car. Luke wrote these numbers. He left three blanks for Sarah to fill in.

What numbers should Sarah write in the blanks?

721 723 725 _____ _____ _____

- ○ 726 727 728
- ○ 726 728 730
- ○ 727 729 731
- ○ 731 733 735

Luke planned to write a letter to his parents to tell them all about his visit to the farm.

He began to think about all he had to tell them.

End of Part A

Now you can go back to check your work, and then take a break. Your instructor will tell you when you are to start Part B.

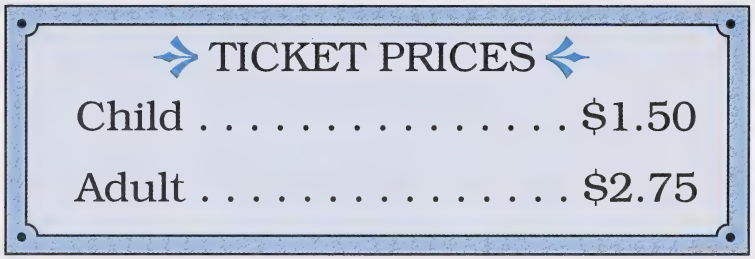
PART B

Sarah and Luke's Visit to the Circus

Follow along as your home instructor reads the information below.

When Luke visited Sarah, a circus came to the town near Sarah's farm. They were able to watch the circus people get everything ready. Sarah and Luke could hardly wait to come back to see the lions, elephants, clowns, and acrobats perform.

21. Sarah, Luke, Sarah's mom and dad, and Sarah's brother Oliver need one ticket each for the circus. The prices are on a sign.



How much does it cost for all of them to go to the circus?

- ○ $10.00
- ○ $10.25
- ○ $9.00
- ○ $9.50

22. The first day, 93 circus tickets are sold in the first hour.

The number 93 is written as

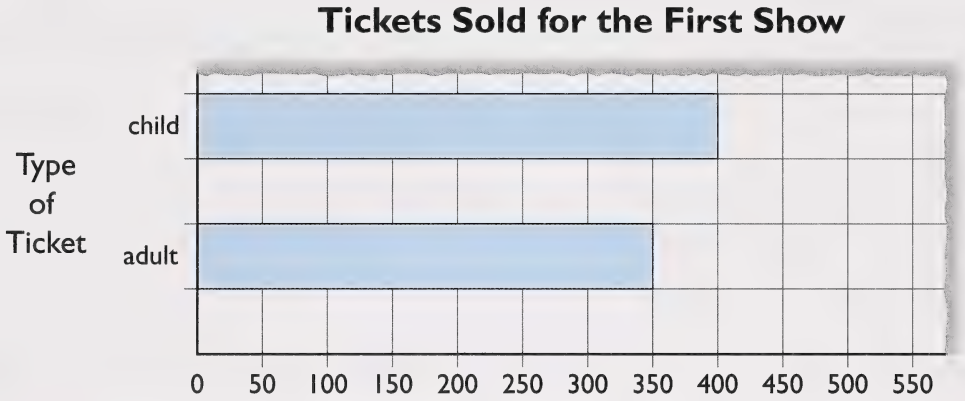
- ○ nine three
- ○ ninety-three
- ○ ninety three
- ○ ninetythree

23. Circus tickets come in rolls of 100 tickets.

How many rolls of tickets does the circus need if 790 people buy tickets?

- ○ 6
- ○ 7
- ○ 8
- ○ 9

24. The graph shows the type and number of tickets sold for the first show.



How many fewer tickets for adults were sold than tickets for children.

- ○ 70
- ○ 80
- ○ 90
- ○ 50

25. Smiley the clown calls out a ticket number. The person with that number wins a prize.

> The winning number today is
> - larger than 400
> - less than 500
> - an even number

Which one of these numbers could be the winning number?

- ○ 398
- ○ 411
- ○ 448
- ○ 562

26. Circus blocks are put in a row like this.

Which of the following blocks will fill in the pattern correctly?

- ○ 
- ○ 
- ○ 
- ○ 

27. Smiley the clown has 725 balloons.

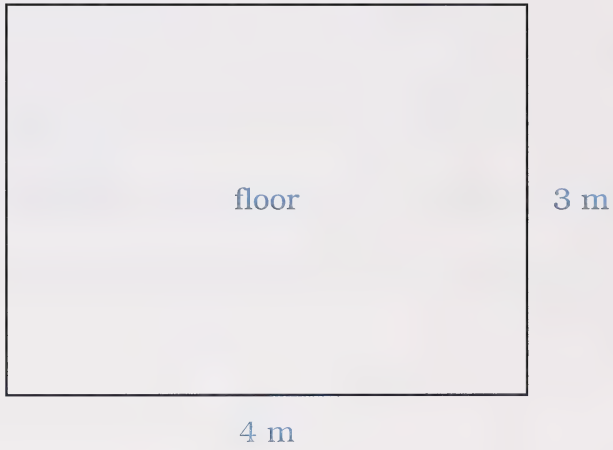
If Smiley gives away 100 balloons each show, how many balloons will be left after 5 shows?

- ○ 225
- ○ 325
- ○ 125
- ○ 200

28. The floor of one of the cages is a rectangle.

What is the perimeter of the floor?

- ○ 7 m
- ○ 9 m
- ○ 12 m
- ○ 14 m

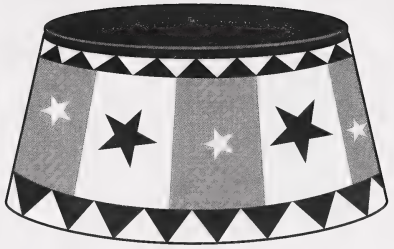


29. The lion trainer wants the lion to stand on an odd-numbered box.

The lion stands on the box numbered

- ○ 20
- ○ 21
- ○ 22
- ○ 12

30. The trainer's stand is decorated with stars.



What fraction of the stars showing is black?

- ○ $\frac{3}{5}$
- ○ $\frac{2}{5}$
- ○ $\frac{3}{10}$
- ○ $\frac{5}{10}$

31. The animals are all fed at 7:15 in the morning. Five hours later they each get a treat.

What time do the animals each get a treat?

- ○ 10:15
- ○ 11:15
- ○ 12:15
- ○ 1:15

32. There are ten animals altogether that receive a treat.

Seven animals have got their treat.

What fraction of the animals still have to receive their treat?

- ○ $\frac{3}{10}$
- ○ $\frac{4}{10}$
- ○ $\frac{7}{10}$
- ○ $\frac{5}{10}$

33. Smiley the clown gives away free tickets. The chart below shows how many tickets Smiley gives away each day.

Day	1st	2nd	3rd	4th	5th	6th
Tickets	4	8	12	16		

If the pattern continues, how many tickets will Smiley give away on the sixth day?

- ○ 18
- ○ 20
- ○ 22
- ○ 24

34. The balloons Smiley uses in his act come in bags of 5.

Smiley needs 47 balloons for his act.

How may bags of balloons does Smiley need?

- ○ 8
- ○ 9
- ○ 10
- ○ 11

This chart gives the prices at the Snack Shop.

35. Sarah wants to buy ice cream and a chocolate bar.

Which group of coins does Sarah need?

○ 

○ 

○ 

○ 

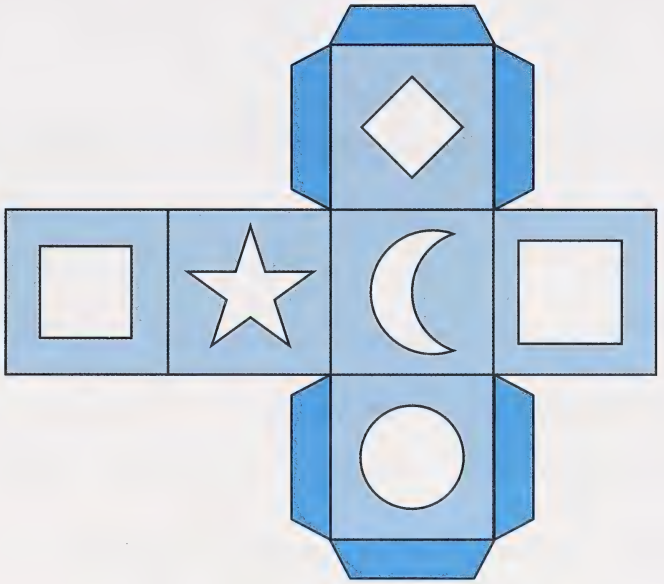
36. The elephant eats 160 kg of feed each day. He eats 85 kg during his first feeding and 50 kg during his second feeding. How many kilograms of feed does he eat at his third feeding of the day?

- ○ 25 kg
- ○ 30 kg
- ○ 50 kg
- ○ 65 kg

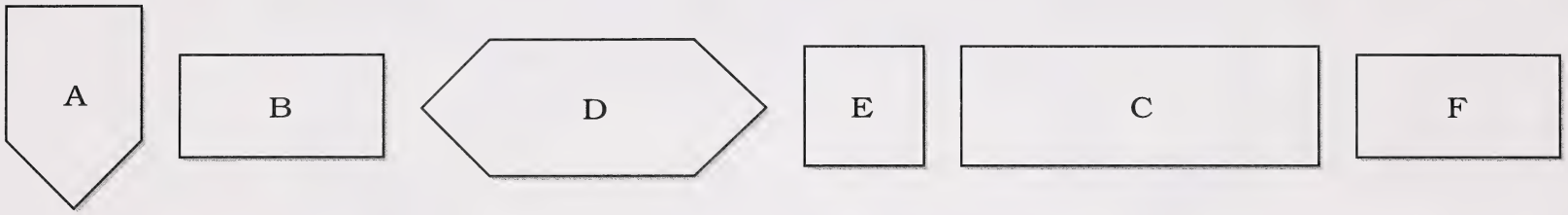
37. This is a net that can be used to make the shape of an elephant's stand.

When the shape is made, which picture is on the opposite side of the star?

- ○ 
- ○ 
- ○ 
- ○ 



38. The animal cages have floors with different shapes.



Which two animal cages have congruent floor shapes?

- ○ A and D
- ○ C and F
- ○ B and F
- ○ B and E

39. Luke and Sarah counted the different acts they saw at the circus. The made this tally chart.

clowns	jugglers	acrobats
𝍸 |	𝍸	𝍸 ||
animal trainers	**magicians**	**motorcyclists**
||||	||	|||

Listed in order from most to least, the acts are

- ○ acrobats, animal trainers, motorcyclists, clowns, magicians, jugglers
- ○ clowns, acrobats, animal trainers, motorcyclists, magicians, jugglers
- ○ jugglers, acrobats, motorcyclists, jugglers, animal trainers, acrobats
- ○ acrobats, clowns, jugglers, animal trainers, motorcyclists, magicians

40. It will take the circus two days to travel to the next town. They will travel 430 km on the first day and 495 kilometres on the second day. How far away is the next town?

- ○ 529 km
- ○ 725 km
- ○ 852 km
- ○ 925 km

As Sarah and Luke leave the circus they talk about their favourite acts. Luke and Sarah will remember the circus for a long time.

End of Part B

You can go back to check your work. Your home instructor will tell you when to stop.

Use the "Answer Key to the Self-Marking Activities" in the Appendix to check your work.

Discuss any questions your student had difficulty with. Try to help the student see where the mistake was made and how to rectify it.

Discuss your incorrect answers and explain your thinking to your home instructor. Think about where you made the mistake and how you could do it correctly.

Check the following Alberta Learning website for other tests if you would like more practice.

http://www.learning.gov.ab.ca Choose "Kindergarten to Grade Twelve," then "Provincial Testing." Under the "Achievement Tests" heading, click on "previously released achievement tests." Choose "Grade Three" and "Mathematics."

Go to Assignment Booklet 9B to complete the Student's Comments before you submit your work to the teacher.

Congratulations! You are finished Grade Three Mathematics! Read Luke's last e-mail to Sarah.

SUMMARY

When Luke got home from his vacation with Sarah and her family, he couldn't wait to e-mail a thank you.

File Edit View Insert Format Tools Help

Send Mail

To... sarah@e-mail.net

Cc...

Subject... Thank You!

Sarah,

I want to thank you and your family for the most exciting vacation ever. I loved seeing the animals on your farm. Camp was so much fun. We even got to see a circus!

Reviewing Grade Three Mathematics together was a blast! We reviewed

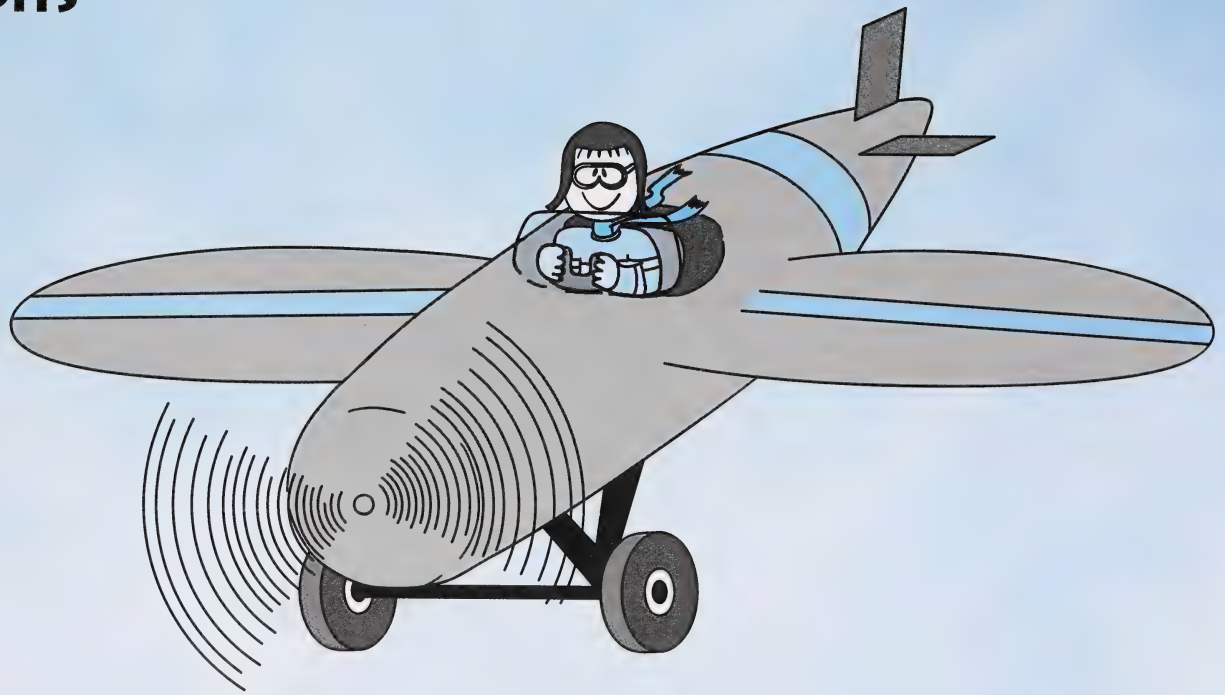
- addition and subtraction
- large numbers to 1000
- patterns and measurement
- multiplication and division
- data and chance
- 2-dimensional and 3-dimensional shapes
- money and fractions

I'm now ready to write the Grade Three Provincial Achievement Test.

Luke

APPENDIX

ANSWER KEY TO THE SELF-MARKING ACTIVITIES
CUT-OUT LEARNING AIDS
IMAGE CREDITS



ANSWER KEY TO THE SELF-MARKING ACTIVITIES

DAY 1: LESSON 1

	Name of Coin	Value
1. a	penny	1¢ or $0.01
b.	nickel	5¢ or $0.05
c.	dime	10¢ or $0.10
d.	quarter	25¢ or $0.25
e.	one dollar (loonie)	$1.00
f.	two dollars (twonie)	$2.00

2. a. $10.00 b. $5.00

c. $50.00 d. $20.00

e. $100.00

DAY 2: LESSON 1

1. To count these quarters, count by **25s**.

2. 25¢ 50¢ 75¢ The total is **75¢**.

3. b. $1.00 $2.00 $3.00 $4.00 The total is **$4.00**.

   c. $2.00 $4.00 $6.00 $8.00 $10.00 $12.00 The total is **$12.00**.

   d. 25¢ 50¢ 75¢ $1.00 $1.25 The total is **$1.25**.

4. a. 25¢ 50¢ 75¢ 80¢ 85¢ 86¢ 87¢ The total is **87¢**.

   b. $1.00 $2.00 $3.00 $3.10 $3.20 $3.30 The total is **$3.30**.

   c. $2.00 $4.00 $4.25 $4.50 $4.75 $4.76 $4.77 The total is **$4.77**.

DAY 2: LESSON 2

1. a. On Monday Luke could have **soup**. He has 60¢.

   b. On Tuesday Luke could have any menu item, but since he has $1.35 a **hamburger**, **cheese sandwich**, **or macaroni and cheese** are the best choices.

c. On Wednesday Luke could have **fries** or a **hot dog**. He has 90¢. The choice must be different from Monday's lunch.

d. On Thursday Luke could have **macaroni and cheese** or a **cheese sandwich**. He has $1.10. The choice must be different from Tuesday's lunch.

e. On Friday Luke could have **fries** or a **hot dog**. He has 95¢. The choice must be different from Wednesday's lunch.

2. Luke had $4.90 altogether. ($0.95 + $1.35 + $0.90 + $1.10 + $0.60 = $4.90)

3. He had the most money for lunch on Tuesday. He had $1.35.

DAY 3: LESSON 1

1. a. $5.00 $10.00 $15.00 $20.00 $25.00 $30.00 **Value: $30.00**

   b. $20.00 $40.00 $60.00 $80.00 $100.00 **Value: $100.00**

   c. $50.00 $100.00 **Value: $100.00**

2. You showed at least two ways to show the values. If you are still having difficulty, practise some different amounts.

DAY 3: LESSON 2

Strategies may vary.

1. $5.00 $7.00 $7.05 $7.10 **Value: $7.10**

2. a. **$5.77**
   b. **$6.30**
   c. **$9.50**
   d. **$8.00**
   e. **$6.20**

Timed Exercise Answers

$4 \times 3 = \mathbf{12}$ $3 \times 5 = \mathbf{15}$ $8 \times 2 = \mathbf{16}$ $4 \times 4 = \mathbf{16}$ $6 \times 5 = \mathbf{30}$ $9 \times 4 = \mathbf{36}$ $2 \times 7 = 14$

$7 \times 1 = \mathbf{7}$ $5 \times 5 = \mathbf{25}$ $6 \times 6 = \mathbf{36}$ $6 \times 7 = \mathbf{42}$ $3 \times 7 = \mathbf{21}$ $0 \times 7 = 0$

8 × 3 = **24**	6 × 5 = **30**	2 × 6 = **12**	4 × 2 = **8**	9 × 4 = **36**	5 × 1 = **5**
6 × 8 = **48**	3 × 2 = **6**	7 × 5 = **35**	4 × 4 = **16**	5 × 3 = **15**	9 × 5 = **45**

DAY 5: LESSON 1

1. The price of the spaghetti and meatballs rounded to the nearest dollar is **$5.00**.

2. Sarah should give the person at the cash register the

   - ● $5.00 bill
   - ○ 2 one-dollar coins
   - ○ 1 two-dollar coin

3.

Amount	Making Change
$1.37	1 one-dollar coin, 1 quarter, 1 dime, and 2 pennies
$2.15	1 two-dollar coin, 1 dime, and 1 nickel
$0.71	2 quarters, 2 dimes, and 1 penny
$1.53	1 one-dollar coin, 2 quarters, and 3 pennies
$0.60	2 quarters and 1 dime
$2.45	1 two-dollar coin, 1 quarter, and 2 dimes
97¢	3 quarters, 2 dimes, and 2 pennies

DAY 6

You may have chosen a different way to solve the problems.

1. You can estimate. Round \$3.37 to the nearest ten as \$3.40. Then add \$3.40 + \$1.00 to get \$4.40. Then add \$0.50 to get \$4.90. You may have added using the pencil-and-paper method as follows.

$$\begin{array}{r} 3.37 \\ +\ 1.50 \\ \hline 4.87 \end{array}$$

   Sarah has enough money to buy the space poster and a ring.

2. This is a two-step problem. You will have to add to find the price of the two items. Then you have to subtract the total from \$10.00.

   The telescope is \$7.85 and the pencil is \$0.63.

   \$7.85 + \$0.63 = \$8.48 $\qquad$ \$10.00 – \$8.48 = \$1.52

   Mike will get \$1.52 in change.

3. You can use a guess-and-check strategy. Estimate which items would add up to exactly $4.00. You may have added several before you found the right combination.

   Star chart $2.59 Animal models $1.41 $2.59 + $1.41= $4.00

   Aziz could buy the star chart and an animal model to equal exactly $4.00.

4. You would probably use a calculator to solve this problem. You could add each item to find the answer.

   2.59 + 7.85 + .63 + 1.41 + 9.94 + 4.19 + 3.37 + 1.50 = $31.48

   It would cost $31.48 to buy one of each item on the sign.

5. You can subtract to find the answer. $5.79 – $1.50 = $4.29

   The book would cost $4.29.

Timed Exercise Answers

11 – 6 = **5**	15 – 7 = **8**	16 – 9 = **7**	11 – 3 = **8**	15 – 6 = **9**	17 – 9 = **8**
15 – 8 = **7**	14 – 7 = **7**	13 – 4 = **9**	10 – 2 = **8**	9 – 3 = **6**	14 – 6 = **8**
16 – 7 = **9**	10 – 2 = **8**	9 – 0 = **9**	11 – 7 = **4**	6 – 3 = **3**	13 – 7 = **6**

10 − 6 = **4**	11 − 8 = **3**	13 − 7 = **6**	12 − 5 = **7**	14 − 4 = **10**	15 − 9 = **6**	17 − 8 = **9**	13 − 5 = **8**	8 − 6 = **2**
9 − 2 = **7**	17 − 9 = **8**	16 − 8 = **8**	11 − 4 = **7**	10 − 5 = **5**	13 − 6 = **7**	7 − 3 = **4**	12 − 8 = **4**	

DAY 7

1. Step 1: **Understand the Problem.**
   Step 2: **Make a Plan.**
   Step 3: **Try the Plan.**
   Step 4: **Look Back.**

DAY 8

Timed Exercise Answers

4 + 4 = **8**	9 + 8 = **17**	6 + 3 = **9**	8 + 6 = **14**	9 + 4 = **13**	6 + 6 = **12**	6 + 5 = **11**
3 + 7 = **10**	4 + 6 = **10**	7 + 4 = **11**	7 + 8 = **15**	6 + 2 = **8**	7 + 9 = **16**	5 + 5 = **10**
3 + 9 = **12**	4 + 8 = **12**	1 + 3 = **4**	6 + 8 = **14**	5 + 2 = **7**		

DAY 8 AND DAY 9: LESSON 1

8 + 4 = **12**	9 + 3 = **12**	9 + 1 = **10**	7 + 5 = **12**	5 + 6 = **11**	9 + 7 = **16**	9 + 9 = **18**
3 + 4 = **7**	9 + 2 = **11**	7 + 6 = **13**	7 + 7 = **14**	8 + 5 = **13**	5 + 7 = **12**	8 + 8 = **16**
4 + 4 = **8**	9 + 5 = **14**					

DAY 9: LESSON 1

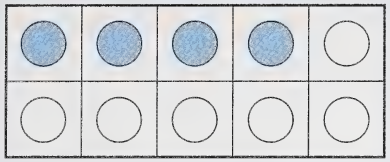
1. a. It's easy to remember the double numbers because the addends are the same. They make a pattern when you say them in order. 1 + 1 = 2, 2 + 2 = 4, 3 + 3 = 6 and so on.

   b. When you count on, you say the first addend and count on the number of times of the second addend.

   Example: 7 + 5 = _____

   Say 7 and count on 5 more (8, 9, 10, 11, 12) to get the answer of 12.

c. Think about a ten frame. What combinations will fill the ten frame with counters?



4 + 6 = 10

Knowing which numbers add up to 10 helps you add numbers quickly.

d. When you know the doubles facts, adding a number that is one more than a double will make the answer one more, too. If you know 6 + 6 = 12, then it's easy to see that 6 + 7 is 13—one more than 12.

2. using counters counting back **fact families**

doubles drawing a picture

3. more, altogether, join, in all, sum

4. left, fewer, run away, go away, take away, less or difference.

5. You could draw a picture, use real things, use base ten blocks, or use a pencil-and-paper method.

6. 34 + 63 = **97**

7. You could draw a picture, use real things, use base ten blocks, or use a pencil-and-paper method.

DAY 9: LESSON 1 AND LESSON 2 AND DAY 10: LESSON 1

8. 87 – 46 = **41**

DAY 9: LESSON 2

1. There are **5** tens and **11** ones.

2. Now there are **6** tens and **1** ones.
   22 + 39 = **61**

3. You will need to trade a ten for ten ones.

4. You have **1** ten and **6** ones left. 43 – 27 = **16**

5. Three methods to check answers are using a calculator, estimating, or using the opposite operation.

6. a. $\begin{array}{r} 45 \\ -\ 13 \\ \hline 22 \end{array}$ ✗

   b. $\begin{array}{r} 37 \\ +\ 43 \\ \hline 80 \end{array}$ ✔

   c. $\begin{array}{r} 84 \\ -\ 57 \\ \hline 37 \end{array}$ ✗

   d. $\begin{array}{r} 62 \\ +\ 29 \\ \hline 81 \end{array}$ ✗

DAY 10: LESSON 1

1. a. **2** hundreds, **2** tens, **5** ones

   b. **1** hundreds, **0** tens, **6** ones

   c. 597 is **5** hundreds, **9** tens, **7 ones**

   d. 380 is **3** hundreds, **8** tens, **0** ones

2. a. The value of the 4 in 347 is **40**.

   b. The value of the 6 in 614 is **600**.

   c. The value of the 2 in 342 is **2**.

   d. The value of the 7 in 73 is **70**.

3. a. 783 = **700** + **80** + **3**

   b. 102 = **100** + **2**

   c. 291 = **200** + **90** + **1**

   d. 540 = **500** + **40**

4. Your home instructor will check your work.

DAY 10: LESSON 2

1. a. 437

   b. 437 has 4 hundreds and 347 only has 3 hundreds.

2. a. (873) 893 b. 502 (500) c. (189) 289

3. 450 385 349 305

4. Look at the hundreds first. The number with the most hundreds is the greatest number. Look at the tens next if the hundreds are the same. The greatest ten will come next. If the hundreds and tens are the same, you will need to look at the ones to see which is greater.

5. a. eighty-seven b. thirty-two c. thirteen

DAY 10: LESSON 2 AND LESSON 3 AND DAY 11: LESSON 1

6. The truck is **eighth** or **8th**. The motorcycle is **sixth** or **6th**.

7. June 23rd or June twenty-third.

8.

JANUARY

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 New Year's Day	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

FEBRUARY

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

MARCH

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24 / 31	25	26	27	28	29	30

APRIL

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

DAY 10: LESSON 3

1. a. $\frac{3}{10}$

   b. $\frac{2}{5}$

   c. $\frac{1}{3}$

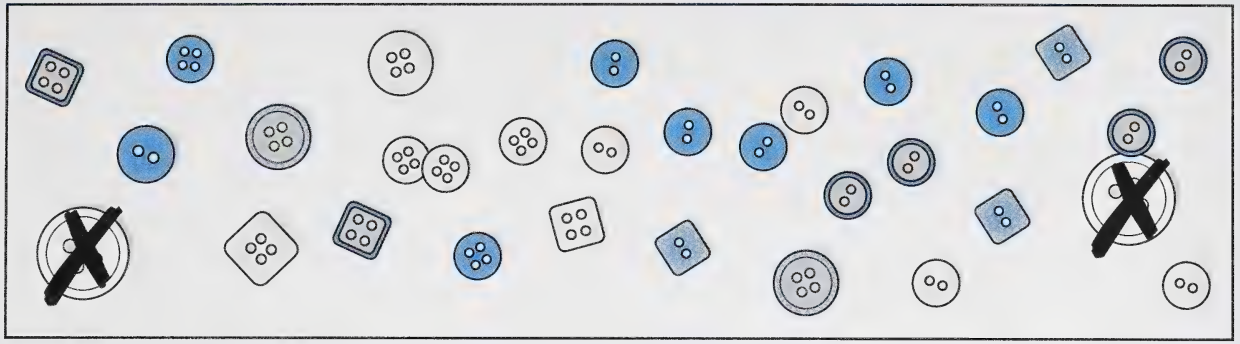
2. There are $\frac{7}{10}$ with stars.

DAY 11: LESSON 1

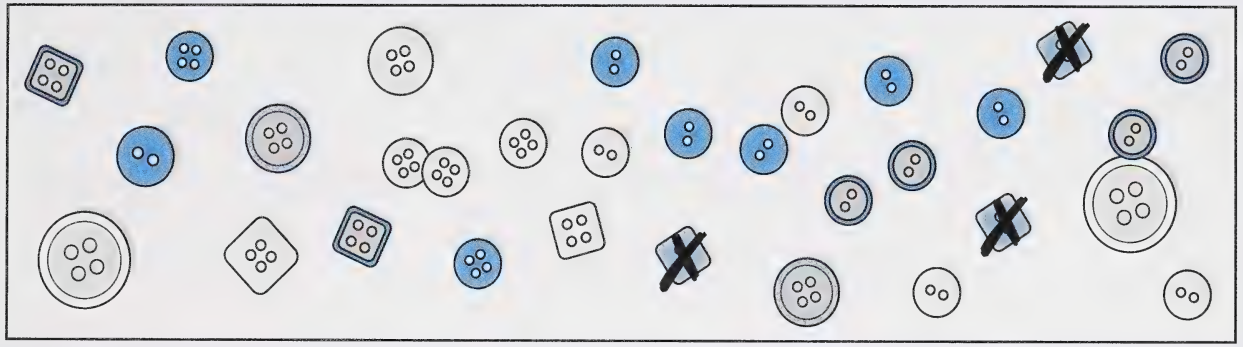
1. You could sort them by value, colour, size, or heads or tails.

2. You should have a different answer than question 1. You could sort them by value, colour, size, or heads or tails.

3.



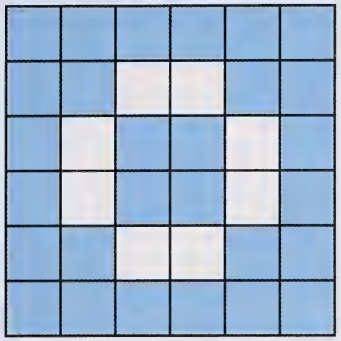
4.



5. a.

b.

c.

6. 

7. A A B B

DAY 11: LESSON 2

1. You may have said all the even numbers are shaded, every second number is shaded, the multiples of 2 are shaded, or every second column is shaded.

2. The hundred chart shows skip counting by **2s**.

3. a. 340 350 360 **370** **380**

   b. 125 150 175 **200** **225**

   c. 3 6 9 **12** **15**

   d. 400 500 600 **700** **800**

4. a. 135 130 125 120 **115** **110**

   b. 800 700 600 **500** **400**

   c. 432 430 428 426 **424** **422**

5. a. 600 500 400 300 Pattern rule: **-100**

   b. 375 400 425 450 Pattern rule: **+25**

   c. 735 733 731 729 Pattern rule: **-2**

6. The shaded row shows counting by 4s.

7. The row shows counting by 5s or + 5.

×	0	1	2	3	4	5	6	7	8	9
5	0	5	10	15	20	**25**	**30**	**35**	**40**	**45**

DAY 11: LESSON 2 AND DAY 12: LESSON 1

Timed Exercise Answers

$5 \times 3 = \mathbf{15}$ $4 \times 5 = \mathbf{20}$ $0 \times 2 = \mathbf{0}$ $1 \times 4 = \mathbf{4}$ $7 \times 5 = \mathbf{35}$ $4 \times 6 = \mathbf{24}$

$9 \times 1 = \mathbf{9}$ $3 \times 5 = \mathbf{15}$ $7 \times 6 = \mathbf{42}$ $7 \times 7 = \mathbf{49}$ $3 \times 8 = \mathbf{24}$ $9 \times 3 = \mathbf{27}$

6 × 3 = **18**	5 × 5 = **25**	4 × 6 = **24**	7 × 2 = **14**	8 × 4 = **32**	3 × 1 = **3**	2 × 7 = **14**
0 × 8 = **0**	9 × 2 = **18**	6 × 5 = **30**	3 × 4 = **12**	2 × 3 = **6**	8 × 5 = **40**	

DAY 12: LESSON 1

1. You may use any type of picture to show the groups.

   a. 2 groups of 3

b. 4 groups of 5

c. 5 groups of 4

2. a. **3** groups of **3**

   b. **6** groups of **4**

   c. **2** groups of **6**

3. **3 × 5 = 15** or

$$\begin{array}{r} 5 \\ \times\, 3 \\ \hline 15 \end{array}$$

4. The hundred chart shows the multiples of **3**.

DAY 12: LESSON 1 AND LESSON 2

5. a. $7 \times 3 = \mathbf{21}$ b. $5 \times 3 = \mathbf{15}$

   c. $6 \times 3 = \mathbf{18}$ d. $9 \times 3 = \mathbf{27}$

6. a. $3 \times 4 = \mathbf{12}$ $4 \times 3 = \mathbf{12}$ b. $5 \times 6 = \mathbf{30}$ $6 \times 5 = \mathbf{30}$

   c. $2 \times 8 = \mathbf{16}$ $8 \times 2 = \mathbf{16}$ d. $2 \times 7 = \mathbf{14}$ $7 \times 2 = \mathbf{14}$

7. a. $8 \times 8 = \mathbf{64}$ b. $5 \times 9 = \mathbf{45}$ c. $9 \times 9 = \mathbf{81}$

DAY 12: LESSON 2

1. Each child would get **6** candies.
2. 7
   Each child would get **7** candies.

3. a. $10 \div 2 = 5$ or $2\overline{)10}^{\,5}$

   There are **5** bones for each dog.

   b. $12 \div 3 = 4$ or $3\overline{)12}^{\,4}$

   There are **4** kittens in each basket.

   c. $24 \div 4 = 6$ or $4\overline{)24}^{\,6}$

   There are **6** doughnuts in each box.

4. There are **4** stars in each row.

5. $4 \times 4 = 16$

6. The same numbers are used. In division the total is divided into groups. In multiplication the groups are combined to find the total. Multiplication and division are opposite or inverse operations.

DAY 13: LESSON 1

1. Your estimate may be a few centimetres different. The pencil is about **20** centimetres or **2** decimetres.

2. The pencil is **21** centimetres.

3. a. 1 decimetre is the same length as **10** centimetres.

   b. 1 metre is the same length as **100** centimetres.

4. 1 kilometre is the same length as **1000** metres.

5. a. kilometres

   b. metres

   c. centimetres or decimetres

   d. centimetres

DAY 13: LESSON 1 AND LESSON 2

6. truck car bicycle

7. a. Spruce Lake Campground

   b. Spruce Dam

8. The perimeter is **30** cm.

9. The perimeter of the flower bed is **16** m.

10. The area of the rectangle is **12** square units.

11. a. Area of A: **12** square units
    Perimeter of A: **16** cm

    b. Area of B: **13** square units
    Perimeter of B: **20** cm

12. a. B has the larger area.
    b. A has the shorter perimeter.

DAY 13: LESSON 2

1. the pail

2. **8** cups

3. the apples

4. a. 1 gram is about as heavy as **a penny**, **a paper clip**, **a jelly bean**, or **a ones block**.
   b. 1 kilogram is about as heavy as **1-litre of milk** or **a thick book**.
   c. 1 kilogram is the same as **1000** grams.

5. a. grams
   b. kilograms
   c. grams
   d. kilograms

6. a. 2 kg.
   b. 40 kg.
   c. 150 g.
   d. The child has the most mass.

7. a. There are **60** seconds in a minute.
   b. There are **60** minutes in an hour.
   c. There are **24** hours in a day.
   d. There are **7** days in a week.
   e. There are **365** days in a year.
   f. There are **366** days in a leap year.

8. The days may be in any order.

Sunday	Monday	Tuesday	Wednesday	Thursday
Friday	Saturday			

9. The months may be in any order.

January	February	March	April	May	June
July	August	September	October	November	December

10. a. nine fifteen or fifteen minutes past nine

    b. eleven "o" two or two minutes past eleven

DAY 14: LESSON 1

1. 237 + 341 = **578**

2. hundreds tens ones

H	T	O
3	1	3
+ 5	2	1
8	**3**	**4**

3. a. $\begin{array}{r} 465 \\ +\ 134 \\ \hline \mathbf{599} \end{array}$ b. $\begin{array}{r} 392 \\ +\ 106 \\ \hline \mathbf{498} \end{array}$ c. $\begin{array}{r} 518 \\ +\ 60 \\ \hline \mathbf{578} \end{array}$

4. 346 + 287 = **633**

5. b. $\begin{array}{r} {\scriptstyle 1\ \ \ } \\ 435 \\ +\ 429 \\ \hline \mathbf{864} \end{array}$ c. $\begin{array}{r} {\scriptstyle 1\ \ \ } \\ 690 \\ +\ 184 \\ \hline \mathbf{874} \end{array}$ d. $\begin{array}{r} {\scriptstyle 1\ 1\ } \\ 783 \\ +\ 58 \\ \hline \mathbf{841} \end{array}$

6. 473 – 322 = **151**

7.

H	T	O
8	7	6
– 5	4	5
3	**3**	**1**

8. 368 – 185 = **183**

9.

H	T	O
	{\scriptstyle 6}	{\scriptstyle 1}
8	~~7~~	3
– 5	4	5
3	**2**	**8**

DAY 14: LESSON 2

1. a. $\begin{array}{rcl} 529 & \xrightarrow{\text{round to}} & \mathbf{530} \\ -\ 304 & \xrightarrow{\text{round to}} & -\ \mathbf{300} \\ \hline \mathbf{225} \leftarrow \text{exact answer} & & \mathbf{230} \leftarrow \text{estimated answer} \end{array}$

2. 537 – 429 = **108**

3. a. $3.79 − $2.05 = **$1.74**

b. $6.45 + $1.13 = **$7.58**

c. $4.64 − $2.28 = **$2.36**

Timed Exercise Answers

14 − 6 = **8**	13 − 7 = **6**	17 − 9 = **8**	10 − 3 = **7**	12 − 6 = **6**	15 − 9 = **6**	8 − 5 = **3**
11 − 8 = **3**	15 − 7 = **8**	12 − 4 = **8**	9 − 2 = **7**	11 − 3 = **8**	13 − 6 = **7**	10 − 5 = **5**
14 − 7 = **7**	6 − 2 = **4**	13 − 4 = **9**	10 − 7 = **3**	9 − 3 = **6**	16 − 8 = **8**	12 − 5 = **7**

13 − 6 = **7**	10 − 8 = **2**	12 − 7 = **5**	14 − 5 = **9**	11 − 4 = **7**	16 − 9 = **7**	15 − 8 = **7**
11 − 2 = **9**	18 − 9 = **9**	14 − 8 = **6**	10 − 4 = **6**	13 − 5 = **8**	9 − 6 = **3**	12 − 3 = **9**

DAY 15: LESSON 1

1.

Vegetable	Number Sold	Total
potatoes	𝍸 ||	7
tomatoes	𝍸 𝍸 |	11
cucumbers	|||	3
beets	||||	4
carrots	𝍸 |||	8

2. The best-selling vegetable was **tomatoes**.

3. The vegetable they sold the least number of was **cucumbers**.

4. The best prediction would be **tomatoes** as the best-selling vegetable for the summer.

5. They will sell more tomatoes than any other vegetable.

6. They will sell less cucumbers than any other vegetable.

DAY 15: LESSON 1 AND LESSON 2

7. a. Sarah's calf eats **10** kg of grain each day.
   b. Sarah's calf eats **15** kg of hay each day.

8. You could add 10 + 10 or multiply $10 \times 2 = 20$ kg. Sarah's calf eats 20 kg of grain in 2 days.

9. You could do the following operations:
   - $10 + 10 + 10 + 10 + 10 + 10 + 10 = 70$
   - $10 \times 7 = 70$
   - Count by 10 seven times, 10, 20, 30, 40, 50, 60, 70.

   Sarah's calf eats 70 kg of grain in one week.

DAY 15: LESSON 2

1. a. impossible
   b. likely
   c. unlikely
   d. certain

2. a. 3 times
   b. every time or 10 times
   c. never or 0 times

3. You are most likely to land on the blue portion because that part is much larger than the other part.

4. You are equally likely to land on any coloured section because each part is the same size.

DAY 16: LESSON 1

1. triangle circle square rectangle

2. cube sphere cylinder cone
   rectangular prism triangular prism triangular pyramid square-based pyramid

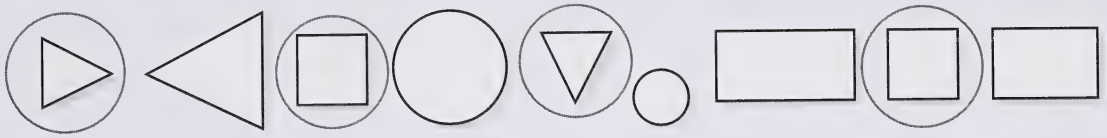
3.

	faces	edges	vertices
	5	9	6
	5	8	5
	6	12	8

4. The triangular prism and rectangular pyramid both have triangles and rectangles for faces. They both have 5 faces. They have different numbers of edges and vertices.

5. Both nets make cubes.

DAY 16: LESSON 1 AND LESSON 2

6. 

The small triangles are congruent, and the squares are congruent.

7. The congruent faces are opposite each other.

DAY 16: LESSON 2

1. a. north
   b. tires
   c. on the west side of the climber

2. The happy face is in section D.

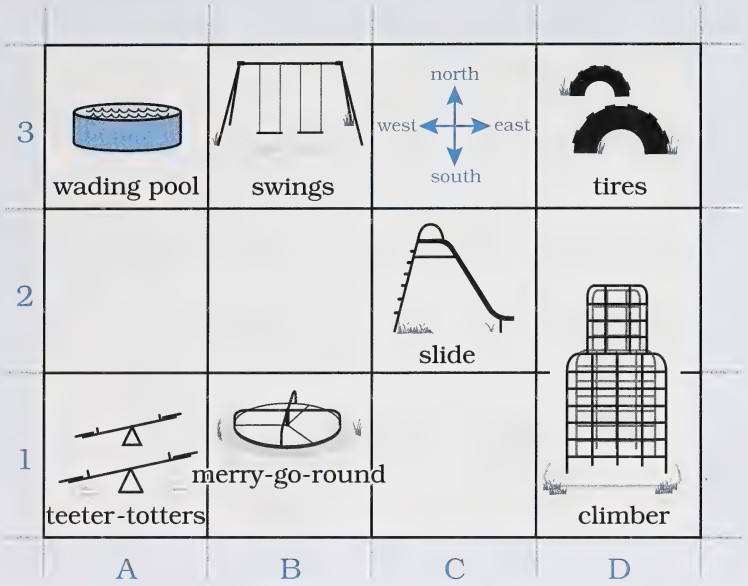
3. If you moved the happy face four spaces to the right, it would be in section H.

4. a. teeter-totters

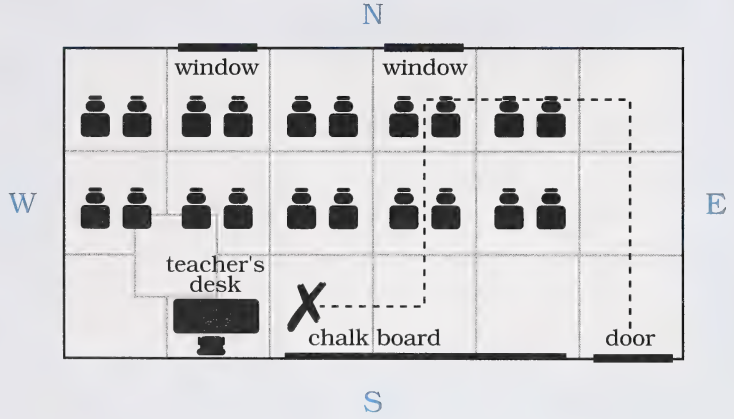
   b. row 3 column B or 3B

   c. row 2 column C or 2C

d.


north
west
east
south
3
2
1
wading pool
swings
tires
slide
merry-go-round
teeter-totters
climber
A
B
C
D

5.


N
W
E
S
window
window
teacher's desk
chalk board
door

DAY 16: LESSON 3

1. a. Temperature: -32° C
You would wear warm winter clothes or boots, coat, ski pants, and mitts.

b. Temperature: 29° C
You would wear cool summer clothes or a T-shirt and shorts or a swim suit.

DAY 17

1.

25¢ or $0.25

10¢ or $0.10

1¢ or $0.01

$1.00

5¢ or $0.05

$2.00

$50.00

$10.00

$100.00

$20.00

$5.00

2. a. $7.73

b. $4.65

Timed Exercise Answers

$7 \times 1 = \mathbf{7}$ $5 \times 5 = \mathbf{25}$ $9 \times 2 = \mathbf{18}$ $6 \times 4 = \mathbf{24}$ $8 \times 5 = \mathbf{40}$ $3 \times 4 = \mathbf{12}$ $0 \times 7 = \mathbf{0}$

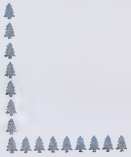
$6 \times 1 = \mathbf{6}$ $7 \times 5 = \mathbf{35}$ $3 \times 6 = \mathbf{18}$ $7 \times 7 = \mathbf{49}$ $6 \times 7 = \mathbf{42}$ $4 \times 8 = \mathbf{32}$

9 × 3 = **27**	4 × 5 = **20**	6 × 6 = **36**	8 × 2 = **16**	7 × 4 = **28**	0 × 1 = **0**
3 × 8 = **24**	5 × 2 = **10**	6 × 5 = **30**	8 × 4 = **32**	7 × 3 = **21**	8 × 1 = **8**

DAY 18

1. ○ 18
   ● 19
   ○ 21
   ○ 29

2. ○ 222 m
   ○ 132 m
   ● 464 m
   ○ 440 m

3. ○ 
   ○ 
   ● 
   ○ 

4. ○ $6.36
   ○ $6.34
   ○ $6.44
   ● $6.54

5. ○ potatoes, corn, peas, lettuce
   ● potatoes, lettuce, peas, corn
   ○ peas, corn, lettuce, potatoes
   ○ lettuce, peas, corn, potatoes

6. ○ 11 kg
   ○ 12 kg
   ○ 24 kg
   ● 22 kg

7. ● 5 kg
   ○ 8 kg
   ○ 4 kg
   ○ 10 kg

8. ○ 
   ○ 
   ○ 
   ● 

9. ● A
   ○ B
   ○ C
   ○ D

10. ○ 5
● 6
○ 7
○ 8

11. ○ 30
○ 10
○ 2
● 3

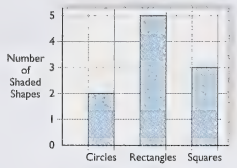
12. ○ 12
○ 15
○ 27
● 28

13.

○	𝍸 𝍸 goat	𝍸 || lamb	|| chick	𝍸 𝍸 𝍸 rabbit
○	𝍸 |||| goat	𝍸 || lamb	|| chick	𝍸 𝍸 || rabbit
●	𝍸 ||| goat	𝍸 | lamb	|| chick	𝍸 𝍸 || rabbit
○	𝍸 | goat	𝍸 ||| lamb	|| chick	𝍸 𝍸 || rabbit

14. ○ north
● east
○ south
○ west

15. ●



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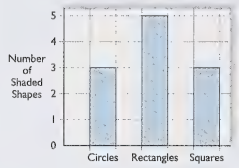

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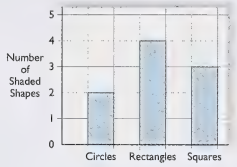

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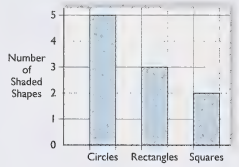


16. ○ 6 − 6 =
● 6 × 6 =
○ 6 ÷ 6 =
○ 6 + 6 =

17. ○ triangular and a rectangular prism
○ cube and a triangular prism
○ pyramid and cylinder
● cone and a cylinder

18. ○ 12°C
● 11°C
○ 13°C
○ 21°C

19. ○ June 8
○ June 15
● June 13
○ June 2

20. ○ 726 727 728
○ 726 728 730
● 727 729 731
○ 731 733 735

PART B

21. ● $10.00
○ $10.25
○ $9.00
○ $9.50

22. ○ nine three
● ninety-three
○ ninety three
○ ninetythree

23. ○ 6
○ 7
● 8
○ 9

24. ○ 70
○ 80
○ 90
● 50

25. ○ 398
○ 411
● 448
○ 562

26. ○ 
○ 
● 
○ 

27. ● 225
○ 325
○ 125
○ 200

28. ○ 7 m
○ 9 m
○ 12 m
● 14 m

29. ○ 
● 
○ 
○ 

30. ○ $\frac{3}{5}$
● $\frac{2}{5}$
○ $\frac{3}{10}$
○ $\frac{5}{10}$

31. ○ 10:15
○ 11:15
● 12:15
○ 1:15

32. ● $\frac{3}{10}$
○ $\frac{4}{10}$
○ $\frac{7}{10}$
○ $\frac{5}{10}$

33. ○ 18
○ 20
○ 22
● 24

34. ○ 8
○ 9
● 10
○ 11

35. ○ 
○ 
○ 
● 

36. ● 25 kg
○ 30 kg
○ 50 kg
○ 65 kg

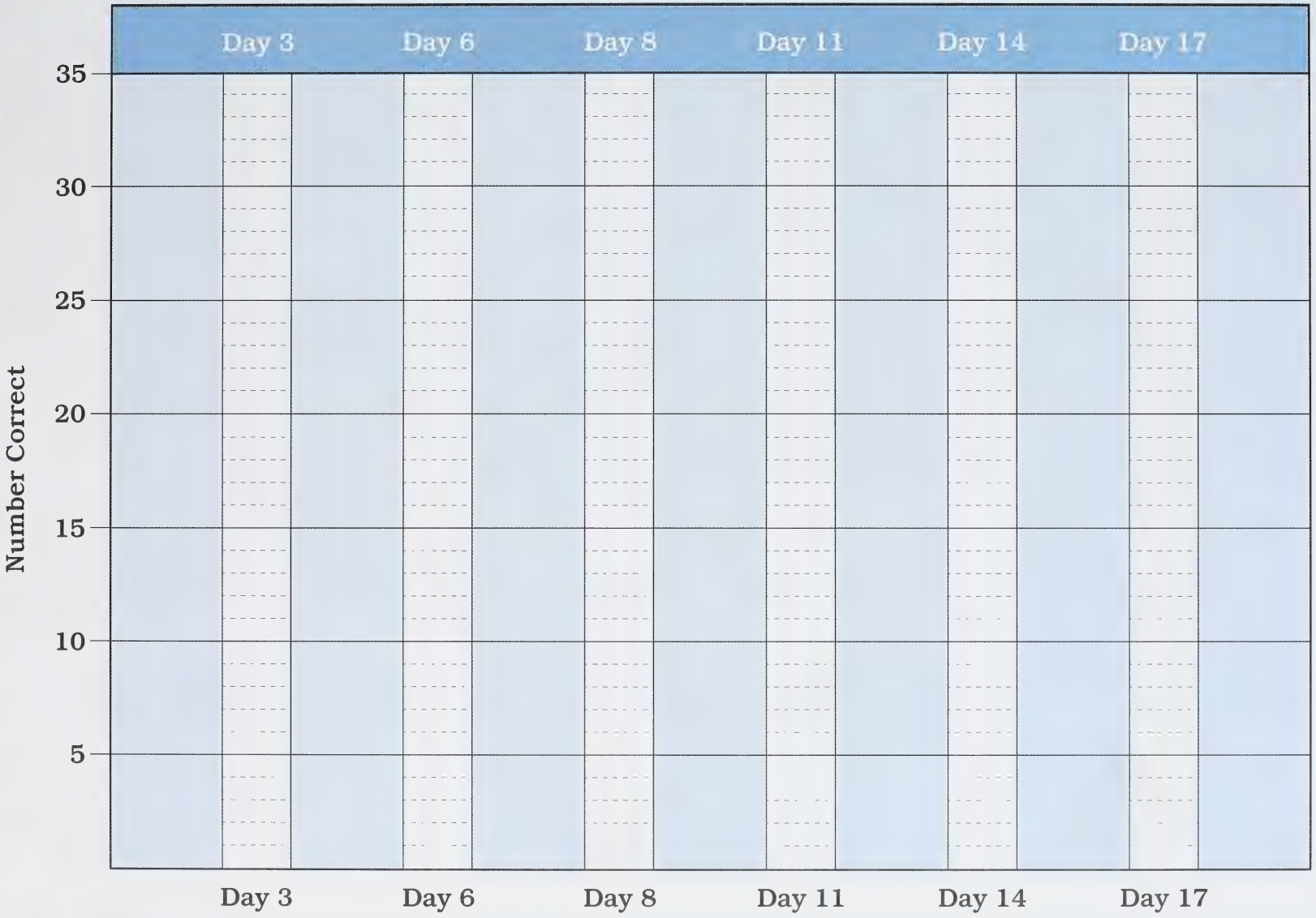
37. ● □
○ ☆
○ ◇
○ ☾

38. ○ A and D
○ C and F
● B and F
○ B and E

39. ○ acrobats, animal trainers, motorcyclists, clowns, magicians, jugglers
○ clowns, acrobats, animal trainers, motorcyclists, magicians, jugglers
○ jugglers, acrobats, motorcyclists, jugglers, animal trainers, acrobats
● acrobats, clowns, jugglers, animal trainers, motorcyclists, magicians

40. ○ 529 km
○ 725 km
○ 852 km
● 925 km

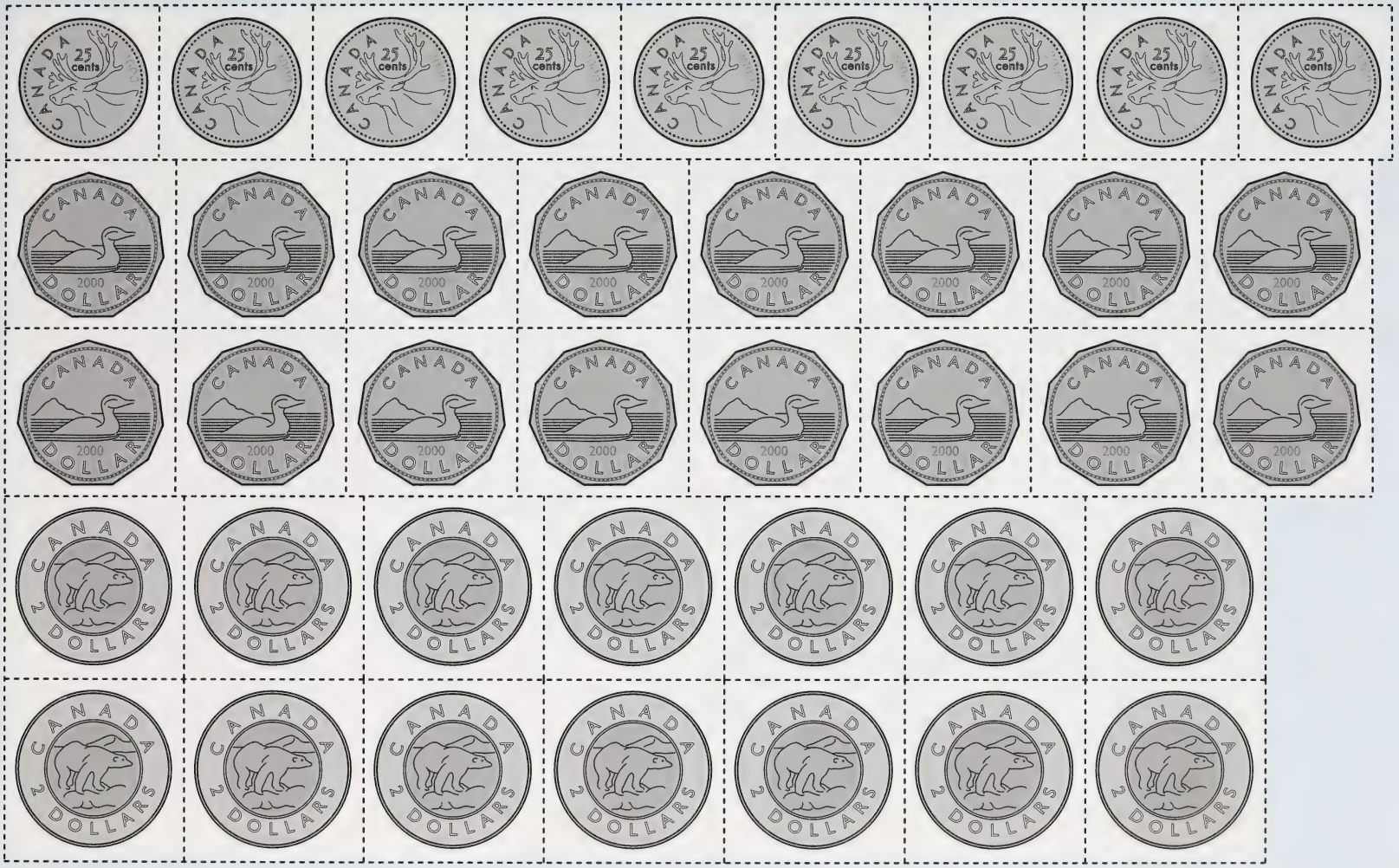
MATH FACTS GRAPH



PLAY MONEY

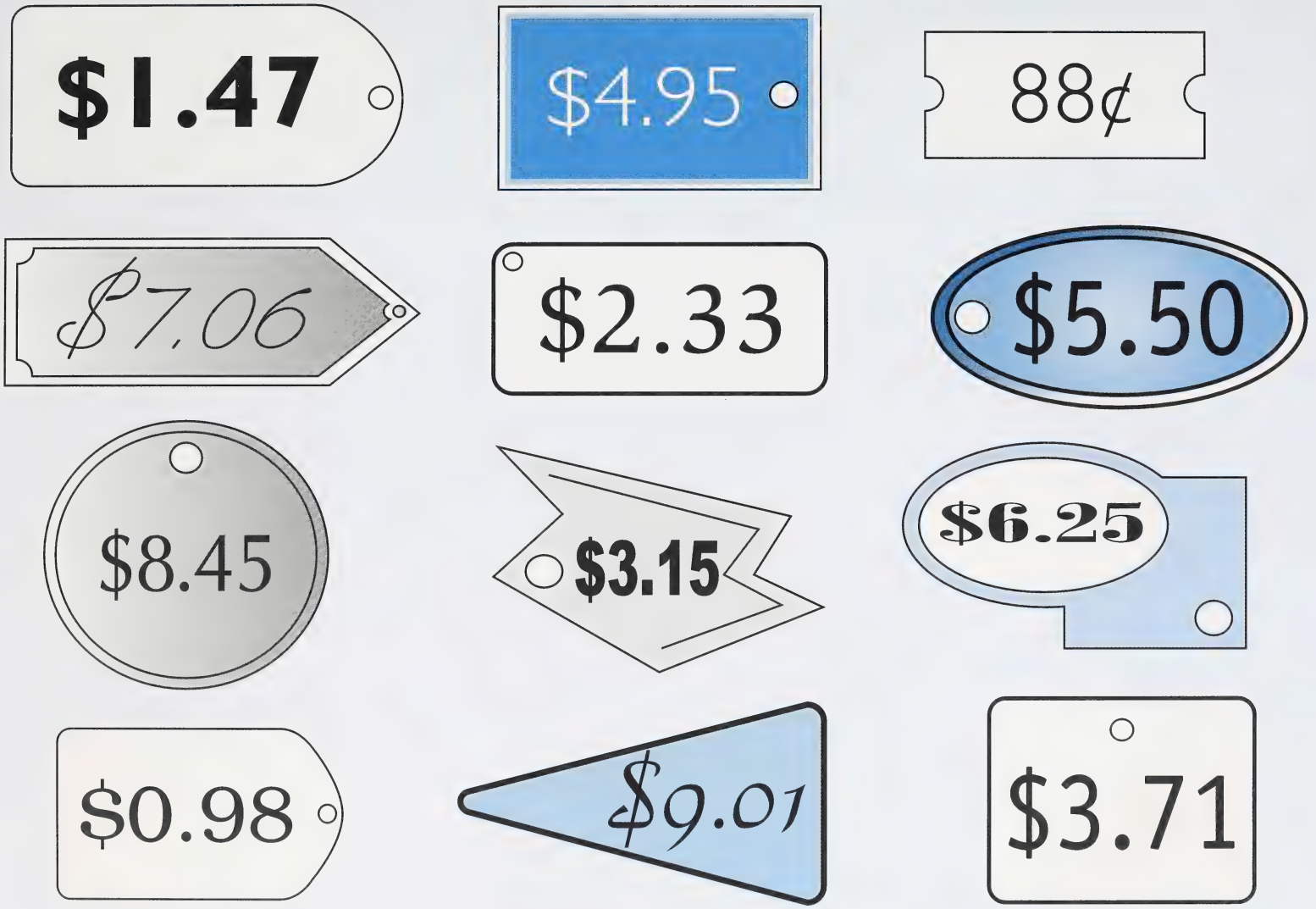

1 CENT
2000
CANADA
5 CENTS
CANADA
CANADA
0 CENTS
25 cents
CANADA

PLAY MONEY




5
$5
5
$5
5
$5
5
$5
10
$10
10
$10
10
$10
10
$10
20
$20
20
$20
PLAY MONEY

PRICE TAGS



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